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PLANET FOR PLUNDER

The Alien's intentions were noble. He sought only to warn Earth's inhabitants of the destruction that threatened them.

In a startling, complete novel

By **HAL CLEMENT**
and **SAM MERWIN, JR.**



SATELLITE SCIENCE FICTION

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Vol. 1, No. 3

A COMPLETE NOVEL

PLANET FOR PLUNDER

by HAL CLEMENT
and SAM MERVIN JR.

The alien's mission was grim, purposeful and scientific. It was only natural that he should mistake men for machines and machines for men. Earth's terrible predicament was not of his making, but it came close to destroying Man.

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THE THREE-IN-ONE NOVEL

To start 1957 off with a real rocket-burst, we are running, for our complete novel in this issue, one of the most intriguing combinations of ideas and authors that, to our best knowledge, even that most fascinating of literary fields, science fiction, has yet known. It is a real triple-threat of a novel. In fact, it can be read three ways.

It began when Hal Clement, the Milton Academy geologist and author of such science fiction classics as *Needle* and *Heavy Gravity Planet*, submitted a short novel describing the actions and reactions of one of his unmatched alien entities during a brief stay on Earth. It was a great story, a terrifying story—but, at the length submitted, it was a story we could not publish in our page limits.

We wanted to publish it—but how? From a nameless source and an editorial conference emerged the idea of writing a counter short-novel, showing the actions and reactions of the Earthfolk involved toward the strange visitor. Mr. Clement's teaching activities forbade him taking on the job immediately, so we turned it over to Sam Merwin Jr.

The novel that has resulted is a contrast in styles—for two authors of more contrasting temperament, talent and experience would be hard to find. But, for once, it is a story where contrast in styles is a binding, rather than a diffusive influence. You can read it three ways, simply by perusing alternate chapters—Hal Clements alien novel skipping from first, to third and so on—or Sam Merwin's human story, taking on the *even* chapters. But *PLANET FOR PLUNDER* is a fine, integrated novel that stands on its own two feet.

LEO MARGULIES,
Publisher



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A COMPLETE SCIENCE FICTION NOVEL

*Out of the star gulfs he came, troubled,
searching, with a warning for Earth no
one dared ignore. Never would Earth see
his like again—or know the reason why!*

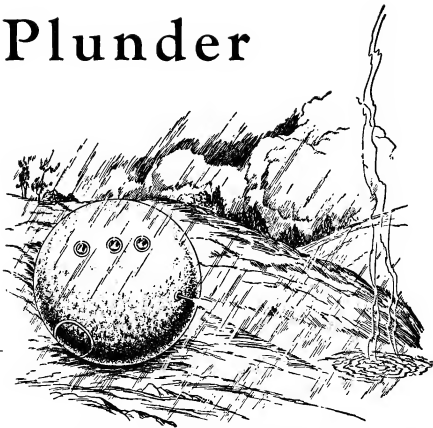
by HAL CLEMENT and
SAM MERWIN JR.

A CONSERVATION SERVICE vessel is quite fast and maneuverable as craft of that general type go. But there was little likelihood that this one would catch up with its present target. Its pilot knew that. He had known it since the first flicker of current in his detectors had warned him of the poacher's presence. But with the calm determination so characteristic of his race, he made the small course-correction which he hoped would bring him through the target area at action speed.

The correction had to be small. Had the disturbance been far from his present line of flight, he would never have detected it, for his instruments covered only a narrow cone of space ahead of him. Too many pilots in the old days, with full-sphere coverage, had been unable to resist the temptation of trying to loop back to investigate disturbances whose source-areas they had already passed.

At one-third the speed of light, such a reversal of course would

Plunder



have wasted both energy and time. No one could make a reversal in any reasonable period, and, certainly, no poacher or other law-breaker was going to wait for the maneuver to be completed.

Even as it was, this pilot's principal hope lay in the possibility that the other vessel would be too preoccupied with its task of looting to detect and react to his approach in time. Detection was

only possible if, like his own ship, the poacher carried but a single operator. Unfortunately, a freighter was quite likely to have at least two, even on a perfectly legal flight, and the Conservation pilot had known of cases where poaching machines had had crews as large as four.

Even the presence of two would render his approach almost certainly useless, since the loading

and separating machinery would require only one manipulator, and the full attention of any others could be freed for lookout duty. Nevertheless, he bored on in, analyzing and planning as he traveled.

The poacher was big—as big as any he had ever viewed. It must have had a net load capacity of something like a half billion tons—enough to clean the concentrates off a fair-sized planet, particularly if it also boasted adequate stripping and refining apparatus. There was no way of making certain about this last factor, for no such equipment was drawing power as yet. And that, in a way, was peculiar, for the poacher must have been in his present position for some time.

Had the driving energies of the poacher been in use, the Conservation ship would have detected them long before, and would have experienced less difficulty in making the necessary course-change. With a scant five light-years in which to make the turn, the acceleration needed for the task was rather annoying. Not that it caused the pilot any actual physical discomfort. It was purely an emotional matter. His economy-conditioned mind was appalled by the waste of energy involved.

Four light-years lay behind him when the poacher reacted outrageously. For the barest instant the attacker dared to hope that

he might still get within range. Then it became evident that the giant freighter had seen him long before, and had planned its maneuver with perfect knowledge of his limitations.

It began to accelerate almost toward him, at an angle which would bring it safely past. It would sweep past just out of extreme range if he kept on his present course—and probably well beyond trustworthy shooting distance, if he tried to intercept it. For an instant, the agent was tempted. But before a single relay had clicked in his own small craft he remembered what the poacher must already have known—that the planet, which had perhaps already been robbed, came first.

It *must* be checked for damage, even though it was uninhabited as far as anyone knew. The mere fact that the poacher had stopped there meant that it must have something worth taking. It must, therefore, be tied as soon as possible into the production network whose completeness and perfection was the only barrier between the agent's race and galaxy-wide starvation.

He held his course, therefore, and broadcast a general warning as he went. He gave the thief's specifications, its course, as of the last possible observation, plus the fact that it seemed to be traveling empty. The absence of cargo was an encouraging sign. Perhaps no

damage had been done to the world ahead. Unfortunately, it might also mean that the raider had a higher power-to-mass ratio than any freighter the agent had ever seen or heard of. But that he seriously doubted. He assumed that the ship was without cargo, and worded his warning accordingly.

His temper was not improved by an incident which occurred just before the giant vessel passed beyond detection range. A beam, quite evidently transmitted from the fleeing mass of metal, struck his antenna, and the phrase—"Now, don't you just hope they'll get us!"—came clearly along the instrument.

Again, relays almost closed on the Conservation flier, but the agent contented himself with repeating his warning broadcast and adding to it the data which had inevitably come along with the poacher's taunt—data concerning the personal voice of the speaker. Then he turned his attention to the problem of the planet ahead.

He would need more energy, of course. The interstellar speed of his craft had to be reduced to the general velocity of the stars in this part of the galaxy, for he could not make the survey that would be needed, merely by viewing the planet as he flashed by. He could, of course, get a pretty good idea of the metals that were present through such flash-tech-

nique, but he needed information as to their distribution. If he were lucky—if the poacher had actually failed to load up—there would almost certainly be concentrates worth recording and reporting to Conservation.

The sun involved was obvious enough, since it was the only one within several light years. The agent thought fleetingly of the loneliness, even terror, which would descend upon the average ground-gripper in close proximity to the nearly empty space at the galaxy's rim and timed and directed his deceleration to bring him to rest some twenty-four diameters from the sun's photosphere.

The poacher had begun to travel long before he drew close enough to detect individual planets, and he was faced with the problem of discovering just which planet or planetoid had been visited. There were certainly enough to choose among and he was reasonably sure he had detected them all as he approached.

The possibility that he had been moving directly toward one for the whole time, and had, as a result, failed to observe any apparent motion for it, was too remote to cause him concern, particularly since it turned out that he had been well away from the general orbital plane of the system. He had the planets, then. But which ones were important?

Since he would have to check

them all anyway, he didn't worry too much about selection. After using up the energy and time needed to stop in this forlorn speck of a planetary system, it would be senseless to leave anything unexamined. Why, he reasoned, should anyone else have to come back later to do what he had left undone? Still, he thought, it would be pleasant to determine quickly what the poacher had accomplished, if anything.

The innermost planet was definitely not the plundered victim. It had plenty of free iron, of course, and the agent noted with satisfaction that the metal was not concentrated at its core. If it ever became necessary to seek iron so far out in the galaxy, stripping it from so small a world would be relatively easy.

However, the important metals seemed to be dissolved and distributed with annoying uniformity through the tiny globe—a fact which was hardly surprising. The planet was too small, and its temperature was too high to permit either water or ammonia to exist in liquid form. The ordinary geological processes which produced ore deposits simply could not function here.

The second world was more hopeful—in fact, it seemed ideal on first survey. There was water, though not in abundance. Nevertheless, in the billions of years since the planet had formed a cer-

tain amount of hydrothermal activity had gone on in its crust, and a number of very good copper, silver, and lead concentrations appeared to exist. The agent decided to land and map these, after he had completed his preliminary survey of the system. If this were the world the poachers had been sweeping, they had evidently failed to get much. Venus might be the plundered planet.

It proved not to be, however. Earth's water is not confined to its lithosphere—it covers three-quarters of the planetary surface. It washes mountains into the seas, freezes at the poles and, at high elevations, even at the equator. It finds its way down into the rocks and joins other water molecules which have been there since the crust solidified. It picks up ions, carries them a little way, and trades them for others.

In short, Earth contains enough water to produce geological phenomena. The agent saw this almost in his first glance. He wasted a brief look at the encircling dry satellite, then he turned all of his attention on the primary planet itself. He even began to ease his ship outward from the orbit it had taken up, twenty million miles from Sol.

This, he decided, must be the world of the poacher's selection. Even without analysis, anyone with the rudiments of a geological education would know that there

must be metal concentrations here—and a civilization that uses half a trillion tons of copper a year can be expected to have at least a few trained geologists.

The agent pointed the nose of his little cruiser at the tiny disc, shining brightly eighty million miles away. He drove straight toward it, combing its surface as he went with the highest-resolution equipment he could bring to bear. All over the surface, and for a mile below, those radiations probed and returned with their information. The agent swore luridly as the indicators told their tragic story.

There *had* been concentrations, all right. There were still a few. But someone had been scraping busily at the best of them, and had left little that was economically worth recovering. It was the old story. If good deposits and poor ones were worked at the same time, the profit was of course smaller. But at least the deposits lasted longer.

An eternity had passed since any legal operator of the agent's race had worked the other way, stripping the cream for a quick profit and letting the others go. Such a practice would have crippled the industry of the agent's home planet millions of years before, had it not been checked sternly by the formation of the Conservation Board.

Crippled industry, to a race at

the stage of development his had attained, was the equivalent of a death sentence. Not one in a thousand of his people could hope to escape death by starvation, if the tremendously complex system of commerce were to break down.

The agent knew that—like most of his profession, he had seen border worlds where momentary imperfections in the system had taken their toll.

His fury at the sight of this planet mingled with—and was fed by—the memory of the horrors he had seen. Apparently, he had been wrong. The poachers had gotten away with their load—in fact, scores of them must have been at work.

No one ship, not even the monster he had seen so recently, could have done such a job without assistance on a planet of this size. The Conservation Department had suspected, before now, that it faced a certain degree of organization among the poachers. Here was infuriating evidence that the suspicion was all too well-founded.

Thought followed reaction through the agent's reception apparatus and through his mind, before his ship was within a million miles of the planet.

At that range no precise mapping was possible. In a sense, surface-mapping was no longer necessary, since the surviving deposits were hardly worth the gath-

ering—but the tectonic charts would have to be obtained as usual.

A world like this was in constant change. A million, or ten, or a hundred million years from now the natural processes within its crust would have brought new concentrations into being. These forces must be charted, so that proper predictions could be obtained. Only through such research and predictions could Conservation beat the poachers to the next crop of metal, when it appeared.

The agent began to decelerate again, now matching his velocity with that of the planet itself. At the same time, he began a more detailed analysis of the surface, refining it constantly as the distance diminished. The water he already knew about. He had supposed the gaseous envelope to consist of methane and water vapor, with perhaps some ammonia, formed at the same time as the rest of the planet. But his instruments told a different story.

Earth had lost its primary atmosphere. The tragedy had occurred before the first member of the agent's race had ventured away from his own planetary system. The agent found the free oxygen, and swore again. He knew what that meant—*photosynthesis*. The planet was infected by those carbon compounds that behaved almost like life, except

for their ferociously rapid rate of reaction.

They were not very dangerous, of course, but due care had to be exercised, and constant vigilance maintained. A good many planets in the liquid-ammonia-liquid-water temperature range had them, and techniques had long since been worked out for conducting analysis, and even for mining in their presence, destructive as they often were to machinery.

The Conservation vessel, naturally, was constructed of alloys reasonably proof against any attack by free oxygen or the usual run of the carbon compounds. In fact, if this world had any unique developments of the latter the agent could always lift his ship out of the atmosphere. Such a retreat seemed to put a stop to the growth of photosynthetic life.

It never occurred to the agent that concealment might be in order. In the first place, he was on a perfectly legal mission. In the second, equally of course, he didn't think that there might be anyone on the planet to observe his arrival.

Oxygen being what it is, he had automatically classified the world as uninhabited and uninhabitable. As a result, the events of the half-second following his machine's penetration of Earth's ozone layer demanded a rather drastic revision of his outlook.

The radar beams, for an in-

stant, made him suppose that another ship was on this world, and was trying to communicate with him. He had almost begun to answer before he realized that the radiation was not modulated, and could hardly be speech—or, more accurately, that its modulation was too simple and regular to represent words. Even though such radiation did not mean intelligence, however, it obviously did imply the presence of life.

Somehow, an organism must have evolved in an oxygen atmosphere with the ability to reduce metal oxides or sulfides, and keep them reduced to free metal. At the moment, it seemed to be a low order of life. But if it continued to develop as the agent's own species had done, this corner of the galaxy might become rather an interesting place in time. A man might have drawn a somewhat similar conclusion from hearing the chirp of a cricket under analogous circumstances.

At first, the agent supposed the radiation to have meaning similar to that of the cricket's chirp, too—it came and it went, regularly and monotonously, from a seemingly fixed source, and had an apparent willingness to go on until the sun cooled. But, a few milliseconds after the first pulses struck his receptors, others began to come in. They shared the simplicity of pattern shown by the

first, but there were more of them.

As the ship moved, and its distance from some of the sources changed, it became evident that the waves were being directed in beams, rather than broadcast in all directions—and that the beams were following the ship. Intelligent or not, *something* was at least aware of his presence.

A score of hypotheses ran through the agent's mind during the next few milliseconds, for thought can move rapidly, when the neurons involved are of metal, and the impulses they carry are electronic currents, rather than potential differences between the surfaces of a colloid membrane. But none of these theories managed to satisfy him.

Even he could not continue to theorize at the moment, either—for the hull of his vessel was glowing bright red, and the surface of the planet was coming up rather rapidly to meet him. He had to land within the next few seconds, assuming that he did not want to do his theorizing hanging motionless in the atmosphere.

The outer surface of his hull was a trifle hard to manage at its present temperature. But none of the myriads of relays further in had been affected and the sliver of metal obeyed his thoughts as it always had, slowing to a dead halt a few yards above the surface and then settling down for a

landing while the agent analyzed the material directly underneath.

It was pure luck that there was no vegetation below him—luck, at least, for any local fire-fighters. The hot walls did respond to control, albeit a trifle sluggishly. Particles of sand and clay, coming in contact with the hull began to dance, like bits of sawdust on a vibrating plate. And like sawdust, the dance carried them into a particular pattern.

The pattern took the form of a hollow under the hull, while the excess soil heaped up around it on all sides. The ship eased gently downward into the crater thus formed, which deepened as it continued to sink. The settling of the vessel, and the deepening of the hole, continued for perhaps twenty feet, before the hull touched solid rock.

When it did, more relays moved, and the rock itself flowed away in fine dust. This continued for only another foot, and then the ship was resting in a perfectly fitting cradle of stone, and the displaced soil was drifting back around it, covering its still red-hot circumference. The sand smoothed itself into a low mound which almost, but not quite, covered the vessel.

Had the agent cared about concealment, of course, he could have dug a little deeper—but all he wanted was good contact with bedrock. There was much map-

ping to do, and the matter of local life would have to wait until it was done.

II

IT WAS ONE of the new, triangular, floating radar installations, some two hundred miles northeast of the Virginia Capes, that first picked up the track of the interstellar visitor. Since the vessel was still well up in the Photosphere, far too high for even the latest model planes, the report was worded, . . . *Unidentified Flying Object, altitude (tent.) 50 mi. plus, speed (tent.) 3,600 mph, direction northwest by west . . .*

The ever-watchful, and super-sensitive network, set up to guard the lives and property of a continent, responded with an instant alert. In the central communications hall of a huge building near Washington, D. C., worried experts and officials gathered around plotting boards or stood in tight-lipped silence before a gigantic map on which reports were automatically registered in moving beams of light. The International situation was hardly tense enough to make probable an immediate enemy action. But in a Cold War period there could be no let-up of suspicion or instant readiness to act.

"The damned thing, whatever it is, is headed straight for Chi-

ago," growled a grey-haired brigadier general, whose face was seamed and leathery from hundreds of air-combat hours.

"She's coming down, too," replied a civilian expert, frowning at the latest reports, which were coming in with increased rapidity as the strange aerial object swept over thickly populated sections of the country. "Altitude only thirty miles over Akron. And she's losing speed by the minute."

"That's what worries me," replied the brigadier unhappily. "If it were a meteor it would be picking up speed. It would be blazing like a comet, even in broad daylight."

"Nobody has yet developed a long-range missile control that will brake an enemy aircraft over the target," said a third member of the high-echelon group, one who wore the light grey-blue of a naval officer in summer uniform. He spoke quietly, almost shyly, but his chest, beyond a highly-colored array of battle and medal-ribbons, carried the heavy silver wings of a command pilot.

"I don't like it," said the brigadier, thrusting his hands deep in his trouser pockets. "Just because *we* don't have this sort of long-range missile control, doesn't mean that *they* haven't come up with it. All those scientists they've been turning out—and the hotshots they grabbed when they moved into Germany, in nineteen

forty-five—" He let it hang there.

"Lord knows, meteors *have* been known to act freakishly," said the naval air officer.

At this point, Great Lakes Station came in with a report that put the UFO, still slowing, still descending, at a point well west of Chicago. There was a general sigh of relief.

But the brigadier remained unhappy. "We'll have to alert every interceptor group in the Northwest," he said quietly. "At the rate that mystery crate is coming down, we'll be able to track up after it any minute now—shooting."

It was the civilian who voiced the thought that had been in all their minds—the thought which none of the others had dared to put into words. He said, "That's going to do us a hell of a lot of good, if she turns out to be a flying saucer. She'll simply take off and zoom out of range."

Nobody answered him, though long looks were exchanged. Then they all went back to checking reports, to planning the interception that seemed to grow more possible with each passing minute. The path of the object seemed to be turning more directly west as its speed continued to lessen, and its altitude to abate. Interceptor command groups within range of its path were ordered to stand by for scramble. Unfortunately, as the object came within

Nike range, it was in a part of the continent where no rocket interceptors had been installed.

Then came a phone call from more than 2,000 miles away—from the lips of the general commanding the nation's Intercontinental Bombing Command. In accordance with their routine of constant test-missions, a squadron of B-52's, much too high for civilian observation, had been carrying out an overnight mock-bombing flight from its home field, in Texas, to a uranium mining complex far up in Northwestern Canada, near Great Slave Lake. Currently, they were making their return journey back to Texas.

Said the commanding general, his voice curiously crisp despite its nasal Midwestern drawl, "Three of my observers just spotted your UFO, flying a course a few points north of due west. It was two miles above them, moving at more than fifteen hundred. It was round and red-hot."

"You mean round—like a saucer?" the brigadier asked, his voice breaking.

"No—it was round like a cannonball. And hotter than an H-bomb!" was the response.

When he had hung up, Minneapolis came in. Object safely past, still descending, still losing speed . . . Bismarck, North Dakota, had the object heading due west. Then came a ground observer report from Miles City,

Montana, and another from Billings. In both cases, it had been seen as a round, red-hot object, streaking westward across the sky.

Then, nothing . . .

It was a rough day for the Radar Network.

IT WAS ALSO, as events were to confirm, a rough day for Field Expedition Seven, Summer of 1957, Montana University of Mines, Departments of Geology and Climatology.

Measured by its human components the expedition was a modest one and consisted of Assistant Professor Harold Parsons, his wife, Candace, and a Climatology Fellow, and Field Worker Donald MacLaurie, known to the regional sportswriters as *Truck*.

Their equipment consisted of one jeep with two-wheel trailer, two tents that had just been stowed away for daytime travel, canned food supplies, and an assortment of tools and instruments, including a Geiger counter bootlegged by Truck MacLaurie and currently the subject of argument between Truck and Professor Parsons.

"Listen, Truck," Parsons said, with all the patience he could muster. "This is a university field expedition, not a uranium hunt. If you want the credit you'll need to play football this fall, you'll keep that click-box out of sight and out of mind. We're here in

the hills to study variations in surface clues to copper-ore formations—that is, I am here for that purpose. With your help, of course—if help is just the proper word for it. Candace is here to study cloud formations in the hills, for long-range precipitation effect on mining operations at Butte and Anaconda. I'm hoping you'll learn enough about geology to enable me to give you that credit, come September—without putting a permanent mortgage on my professional integrity."

"Golly, Doc—I only intended to try her out during my spare time," protested Truck.

"What I'm trying to say, Truck, is this. There isn't going to *be* any spare time on this trip." Parsons paused, and added with a trace of acid, "You're not back sleeping in classroom now. *You're in the field!*"

Parsons didn't have to look at his wife to know how she was reacting to his lecture. Not that Candace would show disapproval in the presence of an outsider. But he was all too familiar with the slight blankness of usually alert and sympathetic brown eyes, the invisible aura of coolness that surrounded her. There were moments when he wished she weren't quite so sympathetic and outgoing in her relations with people. It only made his own diffidence more pronounced.

Nor was he helped by the fact

that, though he stood a wiry six feet one in his socks, he had to look upward to meet Truck MacLaurie's large and blandly childish blue eyes. He also felt hampered by the fact that, while he himself was close to thirty, and Truck a mere twenty-two, the big ox looked about five years his senior.

He was about to cut it short and say, "All right, let's get started,"—when the UFO passed, whizzing, over their heads.

It could not have been more than a mile above them, and it was round as a gigantic egg from some monster bird, red hot as a cooking stone in some giant's barbecue-pit. It was traveling like a bat out of hell, due west, and it was falling fast. Even at that distance, it left in its wake a lingering sense of tremendous heat.

"Golly!" said Truck, following the object's progress with open disbelief. "It's gonna crash that crummy hill, head-on!"

The expedition of three had made camp, the night before, close to the center of an arid valley in the eastern foothills of the Rockies, roughly halfway between the mining communities of Brown and Hamilton. And camped there they still were, in a district where even the decaying remnants of ghost mining communities were scarce. It was rough, wild country—about as rough and wild as Rocky Moun-

tain foothill country can ever get.

The western end of the valley was blocked by a range of minor hills whose topmost peak rose no more than five thousand feet from the valley floor. Unerringly, the speeding object appeared headed for this peak. Looking on with a mixture of amazement and disbelief which precluded horror, Parsons tried to remind himself that perspective played strange tricks, and that the object, whatever its nature, was undoubtedly on a course that must carry it hundreds, perhaps thousands, of miles before it crashed into the rugged terrain.

Then, unaccountably, the object swerved to the south, avoiding collision as neatly as a plane skillfully piloted by a crack ace. It disappeared *around* the peak, not *over* it, and vanished from sight behind the ragged mountain wall.

Then, there was nothing . . . no crash, no explosion. Nothing at all!

"Hal honey," said Candace Parsons, "will you, for the love of Osiris or whatever gods you worship, light me a cigarette?"

Not another word was spoken for almost two minutes. The three of them stood there, spellbound, staring at the wall of hills, waiting for something, for anything. But there was nothing.

Again, it was Candace Parsons who broke the silence. She was

a trim, long-legged girl, with soft brown hair with a texture so fine that it defied shop and home permanents alike. She was remarkable, too, in that her figure and appearance remained pleasantly female, despite her all-over ranginess and the disfigurement of camping clothes.

She said, "Since neither of you geniuses has any idea of what it is, I think we ought to report it, don't you?"

Parsons nodded. He stepped on his own cigarette and ground it out in the sandy soil. "Perhaps if that damned transmitter of ours can clear those hills we came through yesterday . . ." He let the sentence trail off, and with Truck MacLaurie went back to the jeep.

The two of them broke the radio out of the trailer and set it up in the open. After fifteen minutes, it became clear that they were not going to get through. Parsons disconnected the transmitter and nodded to Truck to cease winding the battery. He looked at the football player almost pleadingly.

"No, Doc," said Truck. "If you think I'm gonna wheel this buggy back over the hills while you and Candace have all the fun . . . Well, the answer is no. Let the credits fall where they will."

"Why, Truck!" exclaimed Candace, who had taken a Bachelor of Arts degree in English at a

Midwestern university one year before her interests had veered to Parsons and Climatology. "That's almost poetical."

She saw the way both men were looking at her and shook her head. "I'm not going back either," she added firmly. "I've always wanted to look at a UFO, and if you think I'm passing up this chance—"

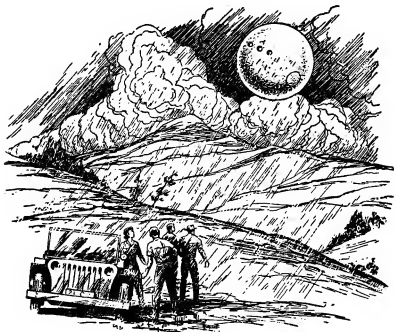
Parsons squinted at the hills ahead. He said, "Okay, Bounty mutineers. Let's put this show on the road. We can run up the transmitter when we hit the next range of hills, and maybe get a

message through to Hamilton or Stevensville."

A moment later, as they took their places in the jeep, he asked: "Candace, you wouldn't kid me, would you?"

"Who's kidding?" she countered. "That thing didnt look like a flying saucer, but it didn't look man-made either. And who ever heard of a meteor with sense enough to detour *around* a mountaintop?"

"Maybe it's a good thing I brought the click-box along after all," said Truck, who was massively filling the rear seat of the



jeep. "You can't tell what that thing may be radiating when we find it."

"If we find it!" Parsons said quietly, steering the rugged little vehicle neatly around a treacherous rock outcropping that lay concealed by a mask of brush.

The object, whatever it was, had flashed over the valley in less than a minute. Covering the same distance by ground had taken the expedition almost all day.

Throughout the morning, and early afternoon, the hot summer sun beat unmercifully down upon them out of a pale blue sky, reddening already painful sunburns and causing Truck MacLaurie to break out with a rash of prickly heat that had him scratching himself almost continually.

They made only a brief stop for lunch—under a low hill that offered a very poor kind of shade. They would not have stopped at all, but Candace insisted they needed to stretch their legs even if they had lost their appetites. She served them slices of processed ham on crackers, and coffee so hot that Truck wanted to know whether she had actually used the heater or had merely left it out in the sun for two or three minutes.

When they resumed their journey, they found the sun shaded by freshly-assembled clouds, which caused the big football player to mutter, "Thank God!

We've got the weather on our side, anyway."

"I don't like it," said Candace, staring thoughtfully at the western sky ahead. The jeep was bumping its way up toward the mountains, and something in her tone caused Hal Parsons to slow down and look at her sharply.

"What is it, baby?" he asked.

"According to meteorological tables, there has been an average of only one inch of rainfall in these hills during August," she said. "Furthermore, there has never been a *single* rainfall of more than a quarter of an inch. Those clouds piling up ahead spell out heavy rain to me."

"Speaks the climatologist," said Parsons, concentrating on a barren, rocky patch of hillside ahead.

"Speaks a girl who'd like to know what's going on," Candace replied.

In the rear seat, Truck MacLaurie scratched, sweated and said nothing.

Slowly, circuitously, Parsons and Truck got the little jeep and its trailer up the roadless hillside, and set its course toward a notch in the hills ahead. It was after five o'clock when they reached the summit of the pass and could look down into the valley on the other side of the range. To all intents and purposes, it was an exact replica of the valley from which they had so painfully emerged.

"I don't see anything," said Truck, letting his eyes roam the panorama of scrub and sand and eroded rock that stretched out before them.

"I don't either," said Parsons, battling a feeling of disappointment which he knew to be absurd. There was no reason to believe that a flying object capable of detouring the mountain peak on their right would have selected such a barren piece of earth as its resting place. It could just as easily have steered past other peaks, over other valleys, until it reached a wide, fertile valley.

"Look at those clouds!" said Candace Parsons, staring not at the valley or the range of hills opposite, but at the sky above. "If we don't get ourselves set up quick, we'll be in for a wetting."

"Hello!" Parsons exclaimed, following his wife's gaze. "It does look grim—and it seems to be right overhead. Come on, Truck."

"I'm glad we're up here, instead of down there," said the king-sized young gladiator, moving to help his professor with the camping gear. "Only time I ever saw clouds like that was in Colorado, when I played left guard for a junior college. We wound up with a flash flood that wiped out half the campus. I came up to Montana Mines the next year."

"Better give the radio another run, before you break out the tents, Hal honey," Candace Par-

sons suggested. "I'll take charge of them until you get a message through."

Even as she spoke, a large drop fell on her forehead, and the slow patter of beginning rain rustled around them. She got busy with the tents, moving swiftly, efficiently, and with surprising strength for a slim-looking woman. But her mind was on the weather that was encompassing them.

It simply couldn't be happening—but it was. Great grey-and-white, swirling masses of cloud had boiled over to fill the heavens above them, and the fall of rain was increasing steadily. Her experience told her that these were not cloudburst formations, from which only a flash flood could be expected. Despite Truck's concern—they looked more like the prelude to long, steady rain. Yet they were low, closing down relentlessly, making the ceiling almost invisible as they blanketed the taller peaks that rimmed the valley.

It was her husband who broke through her abstraction, saying, "Baby, come here. I got through to Stevensville. According to them, every watcher and radar post has been alerted all day. And we're the furthest west observers to have seen that thing. They've only been waiting for another report to start an air-search."

"If it landed anywhere around here," said Candace Parsons, eyeing a sodden cigarette in disgust, "they won't be able to get a plane over these peaks for quite a while—not even a helicopter."

III

THE RADAR BEAMS had stopped—or had, at least, ceased to reach the Conservation Agent—before he had gone underground. The point where he had landed was not in line-of-sight range of any of their stations. Needless to say, however, their operators had not forgotten him.

The agent was not considering possible radar operators. In fact, he would not have considered them even if radar had been, to him, something produced by a machine. He was far too busy listening.

If a human being puts his ear close against a wall, or a door-jamb in a fairly large building he will pick up a remarkable variety of sounds. He will hear doors closing, windows rattling, and assorted creaks and thuds whose origin is frequently difficult or impossible to determine. The one thing he will not hear is silence.

The crust of a planet is much the same on a vastly greater scale. It is always full of vibrations, ranging from gigantic temblors—as square miles of solid rock slip against similar areas on the two

sides of a fault plane—to ghostly echoes of sound and the faintest of thermal oscillations as the sun's heat shifts from one side of a mountain to the other, and the rocks expand and contract to adjust to the new temperatures.

These waves travel, radiating from their point of origin, being refracted and reflected as they enter regions of differing density or elasticity, losing energy as they go by heating infinitesimally the rock through which they pass. They may die out entirely in random motion—heat—while still inside the body of the planet. Or a good, healthy wave-train may get all the way to the other side.

If it does so on Earth, it takes about twenty minutes. Then a fair proportion of it bounces from the low-density zone that is the bottom of the atmosphere, or the top of the lithosphere, whichever you prefer, and starts back again.

And every variation in density, or crystal structure, or elasticity, or chemical composition, has some effect on the way such waves travel. They may speed up or slow down. Transverse waves, or the transverse components of complex waves, may damp out—have you ever tried to skip rope with a stream of water?—and the compressional waves alone go through. Transverse waves, polarized in one direction, may be refracted through an interface, where the same sort of wave strik-

ing the same interface—at the same angle but polarized differently—may be reflected from it.

The important thing is that constantly varying conditions affect the waves. And that means that the waves carry information.

It is confused, of course. Temblors come from all directions, from all distances, due to many different causes, and through all sorts of rock. Interpreting them is not just a matter of sitting down to listen. One might as well tune in a dozen different radios to as many different musical programs, while sitting in the middle of a battlefield with a thunderstorm going on, and try to decide how many flutes were being used in one of the orchestras. The information is there, but selectivity and analysis are needed.

The agent was equipped for such selectivity, such analysis. His sensitive gear could detect any motion of the rock, down to thermal oscillation of the ions, at frequencies ranging from the highest a silicate group could maintain, to the lowest harmonic of a planet the size of Jupiter.

If his instruments proved inadequate, he could listen himself. But since just listening would involve the projection of a portion of his own body through the hull and bringing it into contact with the rock, the act would put a crippling strain on his stone-like flesh, and would consume several millennia

of time. He did not plan to take this alternative. Machines were built to be used. Why not use them?

His own senses reacted at electronic speed—were, in fact, electronic in nature, as were his thought patterns. The process of receiving a group of impulses, and of solving the multiple-parameter equations necessary to deduce all the facts as to their origin and transmission, called for just such a fast-acting computer as his mind, though even he took some time about it.

This, primarily, was because he was careful. A temblor originating near by would naturally have fewer unknowns worked into its waveform by the time it reached him. Therefore, it represented a simpler problem. Also, when solved, that problem provided quantities which could be fitted directly into the equations for more distant wave-sources, since their wave-trains must have come through the same rocks as they approached him.

His picture of the lithosphere around him grew gradually, therefore, and by concentric shells. He saw the layers of different sorts of rock and, far more important, the stresses playing on each layer—stresses that sometimes damped out to zero in the endless, tiny twitchings of the planet's crust and that sometimes built up until the strength of the rocks, and the

vastly greater weight of overlying materials could no longer resist them, and something gave.

He sensed the change, as trapped energy built up the temperature in a confined volume, until the rock could no longer be called solid, even though the pressure kept it from being anything that could be called liquid. He saw the magma pockets formed in this way migrate, up, down and across in the crust, like monstrous jellyfish in an incredibly viscous sea.

He saw certain points on the planet where they had reached so nearly to the surface that the weight above could no longer restrain the pressure of their dissolved gases. An explosive volcanic eruption is quite a sight, even from underneath.

His senses, through the vessel's instruments, probed down toward the core of the world, where magma pockets were more frequent. In such pockets, held in solutions which might some day carry them to the upper crust, they would be accessible—the copper and silver and molybdenum, and other metals his people needed. They would lay diffused through the material of the planet.

Those were the things that interested him. He needed to know the forces at work down there—not in general, as a climatologist knows why Arizona is dry, but in sufficient detail to be able to pre-

dict when and where these metals would reach the upper crust and form ore bodies. The fastest electronic computers man has yet built would be a long time working out such problems, given the data. The agent was certainly no faster, and was less infallible.

He knew this to be so, and, therefore, spent much of his time checking and rechecking each step of the work. The task took all his attention, and, for the time being, he was totally indifferent to impulses originating near the surface—much less to a number of feeble ones which originated *above* the surface.

There was something a good deal more interesting than human reactions to claim the attention of the Conservation operative. He had, of course, confirmed long since his original impression that the ore beds of the planet had been looted. His principal job now was to decide how long the normal diastrophic and other geological processes would require to replace them.

On a purely general basis, replacement should take tens of millions of years for a planet of Earth's size and constitution. Magma pockets would have to work their way up from the metal-rich depths to the outer crust. Then they would have to come into contact with materials which would dissolve or precipitate, as

might be the case, the particular metals he sought.

The geological processes which depended so heavily on water or ammonia, in the liquid state, and concentrated the metallic compounds into ore deposits, could occur only near the surface. Of course, a magma pocket, commencing five hundred miles down, may not go upward. It may travel in any direction whatever, or not at all.

The density, the chemical composition, the melting point of the surrounding material, its ability to retain, in solution, the radioactives which may have been responsible for the pocket in the first place were all vital factors. Equally vital was the question of whether its crystalline makeup is such as to absorb or release energy as increasing temperature reorganizes it—the proximity of one or more of the vast iron-pockets, whose coreward settling contributes its share of energy. All of these things influence the path as well as the very existence of the pocket.

It would be relatively easy to predict, on a purely statistical basis, the number of ore-bodies to be formed in a given ten-million-year period. But the agent needed much more than that. When a freighter is dispatched to pick up metal at one specific point and deliver it to another, the schedule is apt to suffer, if the ship has to wait a million years for its load. Inter-

rupted schedules are not merely nuisances. In a civilization spread throughout the core of the galaxy, none of whose member worlds are self-sufficient, they can be catastrophic.

So the agent measured carefully, and, as he did so, something a trifle queer began to appear. Impulses that did not quite fit into the orderly pattern he had deduced kept arriving—impulses of a nature he found, at first, hard to believe.

Then he remembered that the poachers had been here for quite a while before his own arrival, and an explanation lay before him. The impulses were of the sort that his own hull must have broadcast, while he was digging his present refuge. There could be only one thing which the poachers would logically have left behind them. They could have left evidence of their digging.

They had shown, he decided, a rather unusual amount of foresight for their kind, coupled with a ruthlessness which made the agent wonder whether they had even felt the radar beams that had greeted his own arrival. What the poachers had done was not a thing to do to an inhabited planet.

The out-of-place impulses were from mole robots, slowly burrowing their way into the world's heart. Each one, as the agent patiently computed its position, course, and speed, was headed

for a point where the release of a relatively minute amount of energy would swing delicately balanced forces in a particular direction. The direction was obvious enough. The poachers expected to be back for another load, and were stimulating Earth's diastrophic forces to provide it.

This was a technique often used by legitimate metal-producers, but only on worlds that were uninhabited. Orogeny, even when stimulated in this fashion, may take half a million years to raise a section of landscape a few thousand feet. That still would not provide time to escape for beings who, without mechanical assistance, would take something like the same length of time to travel a few hundred.

From the agent's point of view, the presence of such depth-charges meant that Earth was going to become, in a fairly short time, a writhing, buckling, seething surface of broken rock, molten lava and folding, crumpling, tilting rafts of silicate material on a fearfully disturbed sea of stress-fluid.

Such heartless behavior might prove unavoidable—since he wouldn't be there at the time. But—what had produced those radar beams?

It revolted him that any planet with life should be treated in such a manner. Whether or not the life was currently intelligent was beside the point. Few generations

were needed to transform a life-species, from something as unresponsive as the planet that had spawned them, into a species capable of understanding the internal mechanism of a star in detail, for any distinctions of that nature to carry weight. If those beams had originated from living bodies, something would have to be done about the moles.

The agent simply had not the equipment to do a thing. He could fight his little ship. He could investigate and analyze. He could communicate all the way across the galaxy, if something like the ionized layers of a planet's atmosphere did not interfere.

But he had no mole robots on his vessel, no weapons that would penetrate rock, or even atmosphere, for any great distance. He could not himself stand the temperatures at depths to which some of the poacher's moles had already penetrated. Consequently, he could not follow them in his own ship, even if it were able to dig as rapidly as the robots. It was indeed a problem!

Sending for help was possible, but almost certainly useless. His patrol area was so far out near the galactic rim that any message would take several millennia to reach a point where it would do any good—and the ships which answered it would be at least three times as long in covering

the distance as the radiation that summoned them.

By then most, if not all, of the robots would have reached their designated target points. They would have shut off the fields which held their shape against the pressure of the surrounding rock. Once that protection was gone, no material substance in the universe could keep the half-ton of fissionable isotopes forming their cargoes at subcritical separation. All that energy would come out, and the little that wasn't heat to start with soon would be.

Of course, even such amounts of energy are small in comparison with the usual supplies of a planet's crust. But once released in carefully calculated spots and at even more carefully calculated times they would do exactly what the poachers wanted. The Conservation agent, checking the placement of the moles, could find no fault with the computations of the poachers' geophysicist. He was in his own way an operator of genius!

He could, of course, arrange for official freighters to be on hand when the action bore fruit, and would certainly do so, as a last resort. But he must first attack the question of whether or not life was being endangered. For the first time since the beginning of his analysis, the agent directed his attention to the surface layers of the world.

Then he almost stopped again, as a new theory struck him. This planet had free oxygen in its atmosphere. Would its life, if any, be near the surface? But his hesitation was only momentary. He recalled the radar beams which were his only reason for suspecting life. They could not possibly have passed through any significant amount of rock. While his senses swept the surrounding crust, in ever-widening circles, he pondered the question of just how a living creature could endure such an environment. *Think hard now, concentrate!*

There was one obvious possibility. It might be riding a machine designed to protect it, as he was himself—which would imply that life was not native to this world. If that were the case, locating the creature or creatures should be easy. However, in such circumstances it would have to be assumed that the population was very small, since furnishing machines for all of a large population was a manifest impossibility. It would be unwise too—even if such a thing *were* possible.

A more fantastic idea was that, while the life of this world might have a carbon composition like his own, its metallic parts were of more inert substances—perhaps of the platinum-group metals. The agent knew no reason why these should not serve as well as calcium, in a nervous system. He

might have thought of aluminum, had he been familiar with its behavior in an oxygen-water environment.

Then, there was the notion that a ship of his own race might be down and crippled—the most fantastic of all. No such ship would be this far out in the galaxy, and it was hard to imagine a mishap which would leave the operator alive and safe from the environment, while crippling his communication facilities to the point where nothing but crude whistles came through.

Furthermore, there had been too many points of origin for the beams that had touched him. It might prove a difficult nut to crack.

In fact, it was simply impossible to decide whether one of these hypotheses, or something which had not yet occurred to him would prove closest to the truth. For the time being, there was nothing to do but search. Naturally, it did not take long for the more or less rhythmic impulses originating only a few miles away to catch his attention.

They were seismic, of course, since he was doing all his listening through the rock—but it quickly became evident that they were originating at the very boundary between lithosphere and atmosphere. Almost as quickly, he realized that the sources were moving.

This latter fact complicated the

analysis rather seriously. It took the agent some time to conclude that sets of more or less solid objects, apparently always in pairs, were striking the lithosphere from outside. Sometimes there were relatively long periods of regular, repeated thuds, as one or more of the pairs did its hammering and such periods were always accompanied by motion of the point at which the blows were occurring.

At other times, the hammering was irregular, both in frequency and energy, and usually, though not always, these sequences radiated from a relatively fixed broadcasting point. There seemed to be six basic units producing the impulses. Well, he was making progress, at any rate. Systematic thought could be a joy in itself!

Quite evidently, if this disturbance were caused by local life, that life must be civilized to the point where it could design and build machines. Furthermore, six machines, machines so close together, really did call for thought. It suggested something about the population density of the planet.

On the worlds the agent knew, scarcely one individual in a thousand manned a machine capable of moving him about. To equip the rest similarly would not only be the height of folly. It would be impossible, because enough material could never be obtained, still more because very few of them were temperamentally suited to

physical activity. Even if this race had equipped, say, one in a hundred of its members, the finding of such a number congregated in one spot implied either a tremendous population density or—*could it be that they were looking for him?*

He had never stopped to think what a two-dimensional search would be like. But these machines, he was beginning to think, must be confined to surface-travel—perhaps sub-surface as well—and their operators were assuming that he was on or near the surface of the lithosphere.

The agent cast his memory back over the paths these things had been following, and decided that they might indeed be explained on the assumption they were seeking something and had a very restricted range of sensory perception. He dwelt for an instant on the last assumption, finding it unpleasant.

The radar beams, then, must have been used to track him. He had felt no such impulses, since digging in, although a portion of his hull remained exposed. But his attention had been so completely taken up with his work that he might not have noticed. He began to listen more carefully for electromagnetic radiation, and heard it immediately. On the instant, any doubts that might have remained concerning the intelligence of this race were disposed of.

There was a single source, which seemed to accompany only one of the machines, though the agent found it a little harder to locate precisely than the seismic sources. Apparently radio waves were being reflected from surfaces not in his mental picture of this part of the planet, thus confusing slightly his attempts at orientation. He was disturbed by the seeming fact that only one of these operators talked—and wondered why there had been no answer.

That problem was quickly solved, however. More careful listening disclosed a response coming from a fixed point some distance away. The agent did not attempt to make a seismic check on the environs of this source of radiation, since there was already enough to occupy his attention.

Still, why should only one of these machines, or its driver, be engaged in long-range conversation? Surely the others, if they were fit to be trusted to drive such devices, must occasionally have ideas of their own. It did not occur to him that the impulses might not represent speech—their pattern complexity was too great for anything else, though their tone was rather monotonous—quite literally. The frequency was constant and only the amplitude was modulated.

One possibility, of course, was that there was only one operator present, who was reporting to or

discussing matters with his more distant fellow while he controlled all six of the nearby machines. In that case, however, the impulses he was using to control the subsidiary vehicles should be detectable, and nothing of the sort had reached the agent's senses.

Could it be that the orders were transmitted by metallic connections instead of radiation? They would have to be flexible, of course, since the relative positions of the machines were constantly changing! Yes, that could be it!

IV

Candace Parsons prepared dinner that night in the larger tent, over the fireless cooker. Because, for all of her native independence of spirit, she enjoyed being a woman and Hal's wife, and because she found herself not yet able, either intellectually or emotionally, to accept what had happened to them during the day, she concentrated on preparing the best meal possible under the circumstances.

While Hal and Truck continued to work the radio, under the trailer tarpaulin, she opened a couple of cans of chili, reinforced their contents with extra powder and placed on the stove a panful of the nourishing Mexican dish. She got a pot of coffee smoking, fried a dozen quarter-inch thick slices of bacon, and stirred the heated

chili. Then she carried out to the men large, steaming platefuls of the rib-sticking food. They looked, she thought, as damp as she felt.

Returning with the coffee, she found the plates barely touched and told them, "You'd better eat hearty, characters. Heaven only knows when I'll cook another mess in this downpour."

Hal looked at her sheepishly, turned away from the transmitter and picked up his plate. "Sorry, baby," he said. "But, whatever this is all about, we seem to be it. We've had about everybody but the President on the air, asking us what in hell is going on."

"Let me take over for a while," she urged.

Truck, temporarily deserting his chore at the crank-battery to consume his victuals in what appeared to be three immense mouthfuls, said, "I'm afraid, memsahib, that this is going to be an all-night beat."

It turned out to be just that, since a baffled, excited, curious and somewhat frightened world refused to leave them alone. Increasingly, it became apparent that no other observer, human or electronic, had spotted further passage of the mysterious flying object which Truck called "the Greatest Whatisit." Thus, until the rain let up and the ceiling lifted, the Parsons Expedition was definitely roped down, and committed.

And the rain, as Candace had foreseen, did not let up. That, in itself, was one of the most unusual elements in the situation. According to all reports, the storm that had engulfed them extended over no more than a few square miles, centering upon the valley, and its surrounding territory.

The circumstance caused Truck to suggest, "Well, a limited storm area ought to simplify things. All they'll have to do now is locate the center of the cloud region. The center will be it—granted our Whatisit is seeding the clouds around here with malicious intent."

"How could it seed clouds that didn't even exist until after it came down?" queried Candace.

"So it made its own clouds," Truck suggested breezily. "Take it or leave it."

Candace and Hal Parsons exchanged a puzzled look. It was Parsons who got to his feet. They were sitting, Turkish fashion, on the ground beneath the larger tent's shelter and Parsons arose quickly to say, "Never mind the battery for a moment, Truck. Where's that Geiger counter of yours?"

"You mean to say you're gonna hunt uranium *now*?" Truck asked good-humoredly, as he complied.

"Not exactly," said Hal Parsons, a trifle grimly. "Okay, Truck—thanks." Neither he nor Candace felt up to putting into words the

way they felt about the fear that gripped them. Any object capable of emitting radiations which could create such a furious local storm might well be capable of emitting radiations deadly to all human life within its radius. Both had visions of the Japanese fishermen who, in 1955, were caught in a radioactive fallout hundreds of miles from the Eniwetok atomic testing grounds.

Candace carried the electric lantern as Hal made his way about fifty feet downhill, into the saddle of the pass where they were encamped. She heard the ominous click-click-click of the counter, as her husband turned it on, and caught the strange, tense look on his features—a look sharpened by rainwater and the lantern's bright beam. She had an odd, shafting thought that this was not her husband at all, but a stranger. Quickly she closed mental lock and key on the idea, lest it be a prelude to panic.

He said, "It's high, but that might be caused by any number of reasons."

Candace nodded, and he took a few more strides. Then he bent low over a large puddle, formed in a hollow of the ground, and held the counter directly over it. The speed of the clicking increased by a clearly audible margin. After a moment, he stood up, and turned the instrument off.

"We're okay," he said. "The

rain is radioactive, all right. But, unless we hang around here for a month or two, it's not likely to cause any permanent damage."

"It can't damage *my* permanent," she replied. "I haven't had one in six months, and the coil came out in a week." The moment she had spoken, she felt like an idiot for making such a remark at such a time. On the other hand, she thought, this might be a moment when idiocy could really serve a purpose.

Hal said gently, "Shut up, baby," and then they walked back to the camp in silence, their minds full of oddly-parallel thoughts, hopes and fears. Increasingly, via radio and their own evidence, it was becoming clear that the Whatisit had elected to come to earth nearby, and probably knew exactly what it was doing.

"You know," said Hal, after lighting a damp cigarette, "if our friend had such a thought in mind, he couldn't have figured out a better way to stay clear of observation. Locating him on foot, in this rain, is going to be next to impossible. And the authorities outside the area won't find it easy to get in here. Our trail is washed out by this time. In fact, for all we know, the valley behind us will be flooded by morning. They can't observe from the air, because of the clouds—and the ceiling is so low I don't believe a helicopter

could make a landing anywhere near here."

"Maybe he *does* want to," said Candace, relighting her cigarette thoughtfully.

"But that suggests . . ." Hal looked at her oddly.

"It suggests intelligence, all right," his wife said quickly. "And so did the swift, sure way he steered a path around this mountain yesterday. The big question now is—what *kind* of intelligence?"

"You're giving me the creeps," said Hal. He looked at her in the light of the electric lantern and smiled. But there was no mirth in his smile and when her hand crept toward his along the moist ground, he gripped it almost eagerly.

Truck MacLaurie stood over them. "If you two lovebirds are interested," he said, "I just got word they're sending a plane over in five minutes, to try to drop a flare through the clouds. They'll want to know if we can see it—and where."

The Parsons' scrambled to their feet and waited, by the radio, as the minutes ticked by. An eternity seemed to pass before they actually heard the distant drone of the plane. It grew rapidly louder and, all at once, appeared to be almost directly overhead. The receiver crackled, and Hal Parsons took over.

"You're coming in," he told them. "Parson here, *Over*."

"Roger dodger, Professor," came the buoyant voice of the airman overhead. "We're dropping a flare in five seconds. You should see her in twenty-six, when she blossoms. If you spot any little green men, let us know."

"Fire away," said Parsons. He frowned and added tersely: "And stop clowning."

"Roger dodger," was the reply, and Parsons wished, briefly, that the over-carefree birdman had to take the brunt on the ground with them. Then he recalled Candace's inane remark about her permanent, and it occurred to him that some people found such flipness an antidote to unendurable tension. He waited . . .

The flare burst, no more than half a mile away, its brilliance muted by the heavy mist and rain-fall. Of the valley itself, it revealed almost nothing. Then, slowly, it burned out, leaving the darkness darker than before.

Parsons reported it, not too exactly under the circumstances, and the pilot said, "Well, that tells us exactly what we knew before. Stay with it, Professor."

Curiously, Parsons thought, he sounded discouraged.

Morning dawned, grey and soggy. But even so, the three on the mountain pass were lifted up in spirit by the renewal of light. The rain continued, without letup, and patches of mist clung to the slopes

above and below them—and as far as their vision could penetrate.

They breakfasted on fresh coffee and the warmed-up remnants of the meal they had been unable to finish the night before.

"I never thought I'd have a miniature lake to wash dishes in," said Candace, dipping the plates in a puddle of fresh rainwater, and wiping them dry with a towel. "I've always had to scrub plates with sand on trips like this."

"Yeah," said Truck MacLaurie, "and radioactive rainwater, at that."

"Shut up, Truck," Hal Parsons said sharply, wishing he had held his tongue. It occurred to him, for the first time in his life, that people who can face grim reality and joke about it are, perhaps, far better realists than those who regard it so seriously that even talk of it disturbs them. What was troubling him was not the fact that the rain was mildly radioactive. It was the possibility that the great Whatisit might be emanating radiations of an alien nature, and more deadly to humans than anything the Geiger counter could pick up. Ignoring Candace's silent reproof, he walked slowly to the jeep.

Even though the slope into the valley was not steep, getting down the western side of the pass proved a far more difficult task than hauling the jeep up the east side had been. The reason, of course, was the unremitting rain, which was

turning the poorly fastened dirt-and-sand hillside surface into treacherous, slippery rivers of silt and mud.

On this part of the trip Truck rose to heroic effort. Almost at the valley floor the little vehicle unexpectedly side-slipped into a freshly made brook, causing its rear wheels to stick and the trailer to fall over on its side. In a matter of seconds, the big football player had leapt from the rear seat of the jeep into the shin-deep muck, and was heaving at the trailer, with his neckcords swelling.

Before Hal or Candace could reach him he had unlocked the coupler and was hauling an upright trailer out of the water by main strength.

"The tarp held tight," he said cheerfully, not even panting. With his hair plastered over his forehead and his clothes clinging to him in the wet, he looked as if he had just stepped out of a shower with his clothes on. He added smilingly: "Get behind that wheel, Doc, while I push."

It took their combined efforts, but they finally got the jeep clear of the water and back on reasonably firm soil. Candace returned to the shelter of the jeep-top, while Hal and Truck recoupled the trailer.

Feeling thoroughly ashamed of himself for his previous sharpness, Hal said, "Truck, I'm sorry if I've been riding roughshod over you,

but this whole business has me on edge. I mean, with Candace, and—" He let it hang.

Truck laid a massive, damp hand on Hal's already soaked shoulder and said with a grin, "Doc, don't worry about me. I've been chewed out by so many coaches giving me hell in the locker room that I don't mind a little ribbing from a guy I respect."

For some reason, the atmosphere lightened, though the rain continued to fall—and, curiously, the going grew easier from then on. Twenty minutes later, they had reached the floor of the valley, which extended almost level into the mist that blocked the mountains on the further side.

"Well," said Truck from the rear seat, as Hal slowly brought the jeep to a halt, "now that we're here, what do we do?"

The Parsons exchanged a look. Until then, reaching the valley had loomed as so large a problem in front of them that they had not considered the next move.

Candace laughed and said, "I'd pause at this point to powder my face if it would do any good in the dampness—if I had any powder handy."

To his considerable surprise, Hal found himself paraphrasing a long-forgotten and very ribald old Negro ditty which by rights should have remained buried in the rather scant excesses of his youth. He said, "It's right here for us, and

if we don't find it, why it ain't no fault of its."

"Hey, Doc!" said Truck. "Where'd you pick that one up?"

"Probably," said Candace dryly, "in the very place where he picked me up."

It was the younger man who spoke seriously then. "No fooling, folks," Truck said. "Now that we're here, just how do we go about *finding* our inhuman friend? Don't forget—you're the brains in this pitch. I'm just the muscle."

"I'm afraid we're going to have to use that Geiger counter of yours again," Hal Parsons said. "And no cracks, please! If we can find any variation of intensity in the rainfall radiation, there may be a chance. . . ."

"Gotcha, Doc." Again, the young Goliath was out of the jeep, and working at the trailer tarpaulin.

"Do you think it will work, honey?" Candace asked.

Hal Parsons shrugged. "It might," he said. "It just might."

But it didn't. As remorselessly as the rain continued to fall, the mild radioactivity continued to register without variation. After testing puddles for two hours, the two men returned to the jeep, where Candace had coffee ready for them once more. She asked no questions as to the success of their experiment. One look at their faces as they emerged from the mist told her all she needed to know.

"Carnotite," said her husband, lifting his face from an empty tin cup and wiping his mouth on his sleeve. "Not enough to report on—just enough to bitch us up for an hour, with a false lead. You might not believe it, but this is one hell of a big valley."

"It keeps getting bigger," said Truck MacLaurie mournfully, through a coffee mustache. He looked at Hal Parsons and asked, "Well, Doc—what next?"

Parsons was trying to come up with some sort of a constructive reply, when Candace motioned for him to be silent and lifted her face upward. The others followed her gaze and saw nothing but clouds, rain and fog. Then they heard it—the drone of a plane directly overhead. Without a word, both men handed Candace their empty cups and moved toward the trailer.

It was a mere matter of minutes, before they had the radio back in action, and were trying to communicate with the crew overhead. While Truck cranked away at the battery, to raise power, Parsons hung onto the transmitter, urgently repeating, "Parsons calling plane. Parsons calling plane. We hear you. We hear you. Come on in. Come on in. Over . . ."

All he could get, on the ear-phones, was a rumble of static, through which, now and again, he heard the faint, unintelligible mutter of the operator upstairs, trying to break through. Candace looked

at him anxiously, her hair oddly slicked into bangs by the rain. He shook his head hopelessly.

"Keep trying," she said softly. "Keep trying, Hal honey."

Frustration was high within him, but he nodded and tried again. "Parsons calling plane. Parsons calling plane," he began.

This time, there was no doubt about the answer. It came, clear as a voice in some unbuilt next room, saying, "Parsons calling plane. Parsons calling plane."

"Who's that?" he barked, recalling the impertinence of the aircraft radio message of the night before.

"Who's that?" he barked. "*Hello?*"

"Who's that? *Hello?*" the mocking voice replied.

Parsons mopped rainwater out of his eyes and snapped, "What in hell is going on? This isn't funny, Mack!"

And the voice replied, "What in hell is going on? This isn't funny, Mack!"

"Cut it out, you joker!" he said furiously. "If you've got a message for us, unload it and take off."

To which his tormentor retorted, "Who's that? *Hello?*"

"Hal honey!" interposed Candace, who had crowded close and turned back one of the earphones to catch the mocking message. "Hal honey, he's replying in *your* voice."

"So what?" her husband coun-

tered. "Whoever he is, I'm going to see he gets hell—once we're out of here."

"Just a second." She nudged him clear of the transmitter, bent over the mouthpiece, and said clearly, "Toodle-oo, old thing."

The answer came back clear as spoken—and in perfect reproduction of Candace's voice. "Toodle-oo, old thing."

They stared at each other until Truck came over. He pushed back his hair and said, "What is this—a private game, or can anybody play?"

"It's beginning to look," said Hal quietly, his controlled voice belieing the wild excitement in his eyes, "as if your great Whatisit is as anxious to get in touch with us as we are with him." Then, turning to Candace, he asked, "What do you think, baby?"

"I think," she said, "if I were an alien and wanted to be a radio announcer and could only receive H. V. Kaltenborn, I'd give it back to him just the way he was giving it to me."

V

IT BECAME INCREASINGLY evident to the Conservationist that he could lie there, until he was trapped in an earthquake, making up five hundred theories per second, without getting one whit closer to knowledge of what was happening around him. He was going

to have to examine the machines more closely. The only question was one of tactics. Should he go to them, or have them come to him?

He decided first to try the second gambit, since it offered more promise of drawing out information as to their nature and abilities. He would thus be able to determine precisely what stimuli affected their senses of equipment, and the extent of their capability in analyzing what they did detect.

Naturally, not a wave of their radiation had, thus far, conveyed any meaning to the Conservationist. More accurately, the few patterns that even remotely matched patterns of his own language did not deceive him for an instant by such chance similarities. Nor did he suppose the natives would have any better luck with his language.

His first attempt at attracting their attention consisted merely of broadcasting sustained notes on a variety of frequencies, other than the one they were using. As he had rather expected, these produced no noticeable reaction. Travel and conversation went on unaffected. When he repeated the attempts, using the same wavelength as the natives, however, the results were just as unsatisfactory. It was extremely frustrating.

Travel stopped, and after he had repeated the signal a few times, all six of the vehicles seemed

to come together at one spot. In the pauses between his own transmissions, the native speech sounded almost continuously. Yet he felt doubt that he had even been heard.

He had rather expected that there might be an attempt to respond to him in kind, but this did not occur, even though he tried sending out his wave in various long and short pulses which should have been easy to copy. At least, he used lengths corresponding to those of the radar pulses which he had felt at his arrival, and which had, presumably, been emitted by members of this race.

They failed to respond to the patterns, however, even when in desperation he increased the lengths of the bursts of radiation to three or four thousand microseconds. The very speech patterns of the natives changed carrier amplitude in shorter periods than that—they must, he felt, be able to distinguish such intervals!

The agent began to speculate upon the general intelligence-level of this alien new race. He had to remind himself forcibly that, since they could move around so rapidly, they must be able to design and build complex machines. It was startling, to say the least.

Then it occurred to him that *all* the vehicles he was watching might be remote controlled, that the electromagnetic waves he was receiving were the control impul-

ses. Yes, yes, that must be it! He spent some time, trying to correlate the radio signals with the motions of the machines. The attempt, of course, failed completely, since men are at least as likely to talk while standing still, as while walking around.

This proving a poor check on his hypothesis—it did not disprove it, since the machines might be able to do many things besides move around—he tried duplicating some of their complete signal groups, watching carefully to see whether any motion of the vehicles resulted. He realized that the controlling entity might not like what he was doing, but he was sure that satisfactory explanations could be made, once contact was established.

The result of the experiment was a complete stoppage of motion, as nearly as he could tell. It was not quite what he had expected. But there was some gratification in getting any result at all. For several whole seconds there was silence, both seismic and electromagnetic.

Then the native speech—it had to be speech—began again, in groups which still seemed long to the agent, but which were certainly much shorter than most of those used before. He duplicated each group as it came.

"Who's that? Hello?"

"Who's that? Hello?"

"What in hell is going on? This isn't funny, Mack!"

"What's going on? This isn't funny, Mack."

"Cut it out, you joker! If you've got a message for us, unload it and take off!"

"Who's that? Hello?" The agent decided the last signal group was too long to be worth imitation, so he went back to one of the earlier groups. This action resulted in brief silence, followed by a pattern, brief, but with a fresh modulation, which he mimicked accurately. For several whole minutes, the conversation, if it could be called that, went on. He felt real pride now, a self-congratulatory kind of exaltation in being able to carry off his cleverly assumed masquerade with perfect confidence, vigor and, certainly, no small measure of success.

The Conservation agent had decided long since what the native machines would almost certainly do, and was pleased to detect them getting into motion once more. But when they had gone far enough for him to determine their direction of travel, he discovered, with some disappointment, that they were not moving toward him.

He would have had little trouble solving their motives, had they been moving straight away from him. But the angle they took carried them more or less in his direction, albeit considerably to one side. He found this a complete

mystery, at first. Finally he noticed that the group was traveling along a depressed portion of the lithosphere's surface, and seized upon, as a working hypothesis, the idea that their machines found it difficult, or impossible, to climb slopes of more than a few degrees.

In that case, of course, they might not be able to reach him, directly or otherwise, since he had buried himself some distance up the side of a valley. He considered again leaving his position and coming to meet them, but reached the same decision as before—that he could learn more by seeing what they did on their own.

They spoke rarely as they traveled—but the agent found that he could always make them broadcast, by ceasing to radiate his own signal. Had they not been pursuing such an odd course, he would have supposed, from that fact, that they were using his radiation to lead them to him. His radiation! However, they kept on their course until they were somewhat past its nearest point to his position before they paused. Then there was a brief interchange of signals with some distant native, apparently in an atmosphere machine, and travel was resumed, at right angles to the original direction.

Now, however, the vehicles were heading away from the buried ship, had, in fact, turned left. The Conservationist gave up the-

orizing for the moment and contented himself with observing. He repressed his mounting excitement and became as still as a figure of stone.

They did not travel very far in the new direction. In less than half an hour they stopped again, held another brief conversation, and then began to retrace their steps to, and finally across, their original route. Apparently, they were still interested in the agent's broadcasts. At any rate, they continued repeating the early "Hello" and "Who's that" signals to which he had originally responded, whenever he stopped radiating. They were not following the radiation, but certainly—almost certainly—they had some interest in it.

Then, quite abruptly, they stopped traveling and appeared to lose interest in the whole matter. The group broke up, and its members wandered erratically about for some time. Then they drew together once more and gradually quieted down completely, or at least to the point where the agent could not be sure that the occasional impulses coming from that area were due to their motion.

He had just developed another theory, and this new trick bothered him seriously. He would have preferred to ignore it, but he could not. It had occurred to him that these creatures might be able to detect electromagnetic radiation of the sort he had been broadcast-

ing, but not be able to identify the direction from which it came. He had heard of cases of physical injury among his own people which had produced such a result.

The idea that such a disability might be universal in this race called for a severe stretch of the agent's imagination, but he toyed with it all the same. As a result, he had just come to realize that the peculiar motions of the things he had been observing could indeed be accounted for by the assumption that they were searching for him under some such handicap—when they stopped moving. This was hard to reconcile with any sort of search procedure. What possible reason could stop them? He wished sometimes there could be fewer complexities in his existence. What possible reason?

Lack of fuel? Inconceivable, assuming even minimum intelligence on the part of the operator or operators.

Surface impossible for the machines to travel over? Unlikely, since several of them had come some distance toward him during their erratic wandering after the halt of the main body. And there had been others in the atmosphere.

Sun-powered mechanisms, halted by the fact that night had fallen? It was possible, though it seemed a trifle odd for such a device to be used on a rotating planet, where it must be sunless

half the time. Also, it seemed doubtful that the machines were large enough to intercept the requisite amount of solar radiation. The agent had a fair idea of their size and mass, from the minimum observed separation, plus the energy with which they struck the ground.

Not interested in him at all, and stopped simply because they had reached their intended destination? This seemed all too painfully probable, if the course of their travels were considered by itself—yet nearly impossible, if their reaction to his broadcasting were taken into account.

It was at this point that the agent began to consider seriously the possibility that he might never be able to get the information of their danger across to the inhabitants of this planet. Their behavior, so far, seemed to lack any element he could recognize as common sense. He was open-minded enough to realize that this might work both ways, yet such a possibility did not augur well for the chances of successful communication between the two intelligences involved. There were cynics even among his own people who claimed that folly and ignorance always went arm in arm, and were biological constants throughout space.

Once more, he was facing the question of whether he should go to meet these gadgets, or wait

where he was—and, in the latter case, how long he should wait. Certainly, if he were to check the possibility that they were sun-powered, he should not stir until after night was over.

But none of the other hypotheses could very well be tested without actually examining, at close hand, the natives and their machines. He decided, then, to wait until sunrise, and for a reasonable period thereafter. Then, if these things did not resume their journey in his general direction, he would seek them out.

As it turned out, he did not have to move. The appearance of the sun saw the vehicles already in motion, which was informative in a negative way. After a brief period of random traveling, they congregated once more, seemed to confer silently for a time, and then resumed travel along their former route. Also, they broadcast once more the signal the agent had come to interpret as a request for him to start transmitting.

The events of the preceding afternoon were repeated in some detail. The group continued past the agent's station on their straight-line course for a short distance, then stopped, and once more made a right-angle turn. This time, it was to the right, toward the hidden alien—and the agent realized that this theory about their sensory limitations must be at least partly correct.

They had to go through elaborate maneuvers to locate the source of a radio broadcast—maneuvers which suggested that even their ability to judge the intensity of the radiation was rather crude. It took them about a tenth of the planet's rotation period, this time, to narrow the field down as far as their radio senses appeared to permit.

Before mid-morning they had made two more right-angle turns, and then spread out to cover, individually, the remaining area of uncertainty. The agent settled comfortably in his hole and awaited discovery. This should tell him much.

Just how close would these things have to come to detect him directly? Would he be able to pick up their nerve-currents first? What would they do when they found him? How long would it take them to realize that he was not a native of their world? And, most important, would they have some constructive ideas about means of communication? Who did he think he was fooling? At the moment the agent would have admitted to anyone that he himself had none. And if he was up against a blank wall in that respect, how could he reasonably expect them to come up with something really new and brilliant?

He kept his own senses keyed up, striving to detect the first clue, other than radio and seismic

waves, of the nearness of the Earthly machines. Presumably, they were more or less electrical in nature, and he knew that electric and magnetic fields must, sooner or later, draw close enough to give him a picture of their structure. A little closer than that, and the electric fields of the operators' nervous systems should permit him to deduce their shapes and structures—assuming, of course, that at least one operator was with the present group of machines, which could hardly yet be considered certain.

Although it was the machine with the radio that actually stumbled on the buried vessel, the radio was not in use at the time. As a result, the agent decided, rather quickly, that no operator was in fact present. The radio was, of course, put to use the moment the ship was sighted—but its structure and nature was obvious to the alien, and it was quite evidently not an intelligent being.

It was, however, the only object in the vicinity with functioning, electrical circuits. Moreover, there was no direct sign of life in any of the machines which gathered quickly around the ship. Finding it a little hard to believe even his own theories, the agent once more examined the radio—only to reach the same conclusion.

Its organization was not sufficiently complex to compare with a single living crystal, much less

an entire nervous system. The conclusion seemed inescapable. Not only was the machine carrying it being controlled from a distance, but even the vehicle itself operated *without detectable electrical forces*.

The machine, of course, could not be invisible. His failure to see it meant merely that he was employing the wrong means—*anything* material can be seen, in some way or other. There remained the question of just what *were* the proper means in this particular case.

Free metals affected electric or magnetic fields, or both, in ways which permitted their recognition. Only a few fragments of such material were present—fragments quite evidently shaped by intelligence, but not themselves part of either an intelligent body, or even a complex mechanism.

Non-conducting crystals reflected and refracted many kinds of radiation. Perhaps these things, then, could be *seen*. The only trouble with this idea was that eyes were not a normal part of the agent's physical makeup. While his ship possessed several which were used in navigation—stars were most easily detected and recognized by light waves—they all happened to be underground at the moment. He had never anticipated a use for them on the surface of the planet, not being himself a chemist.

The machines were now all moving about on the ground in his immediate vicinity. One of them even moved onto the exposed section of his hull for a few moments and it gave him his first chance to approximate their mass really accurately. Unfortunately he could not determine precisely how much of the energy radiating from their footsteps was due to weight.

The machine on his hull carried a tiny ionization tube, whose behavior at the moment was being affected by the mild radioactivity of the ship—activity only natural after a million years in interstellar space. The purpose of the tube was no more obvious than that of the electromagnetic radiator. Neither could move or think. The only possibility seemed to lie in a connection with the remote control of these machines. Perhaps, they were sensing devices of some sort.

There seemed no logical reason for not raising the ship far enough to get a look at these alien machines. He had discovered all he could expect to learn, from where he was. They *did* receive him. They *were* interested, and they, therefore, had at least glimmerings of intelligence. They could *not*—or, at least, their machines could not—determine the direction from which radio-waves were coming.

It was still not clear to him

whether these machines were under the control of one individual, or that of several. There seemed no way of investigating this important question for some time to come. What the agent wanted to know, as soon as possible, was just what sort of mechanism could operate *without perceptible electrical fields*—and that seemed to demand that he *see* them. Yes, he must see them.

His hull had long since cooled, and could be controlled without difficulty. He started it vibrating again, and, simultaneously, applied enough drive to counteract the weight of ship and its contents. For a fleeting instant, he wondered whether the distant operators could detect the flickering of the myriads of relays that responded to his thoughts, or even the electrical fields of the thoughts themselves.

If the latter were true, they could certainly not interpret them properly. In that case, the machines would have found him much earlier, and the agent would, by now, have been holding a conference with them about the best means of intercepting the mole robots. That possibility, he decided, could be ignored.

The patrol flier lifted easily, until over half its bulk was above the ground. Its pilot held it there, briefly, while the rhythm of the hull packed and firmed the powdered soil that had drifted beneath

it. Then he cut his power once more, and began to look about him with his newly uncovered eyes.

VI

THE LITTLE PARTY'S jubilation had proved short-lived. They had, it was true, attained communication with the Whatisit—but apparently all that it could or would do in this field was to mimic their voices and speech in startlingly unexpected fashion. After a quarter of an hour of ever-increasing exasperation, Truck MacLaurie won Parsons' temporary disfavor by suggesting, "Hey! I wonder if it can sing."

Candace didn't help the geologist's feelings by laughing outright at the infantile remark.

Hal said, "It's not funny, dammit! How are we going to get any more sense out of it. You'd think from the way you act this was a Sunday School picnic—not something deathly serious, even terrifying."

"I guess we'll have to find it first," said Truck, rubbing his face briefly dry with a large blue bandana. He looked more troubled and uneasy than he had permitted himself to look a moment before.

Candace gazed sadly at the ruin of her cigarette. "I wonder," she said, "just how we're going to accomplish that."

"Follow the beam," Truck suggested. He spoke lightly, but all the levity was gone from his stare.

"Get in," said Parsons, nodding toward the jeep. "We're going to find out if our friend really *is* beaming his messages."

They drove a quarter of a mile and tested. The baffling mimicry aped them just as clearly, just as strongly, as before.

"Maybe," said Candace optimistically, "we're headed straight toward him."

"Not likely, dear," said Parsons. But he got the jeep going over the rough terrain at right angles to their previous direction before making another test. Once again, the mockery continued without any noticeable fluctuation in volume or alteration in its monotony of tone.

"*Damn!*" he exclaimed fervently. "He's sending without direction."

"What makes you so sure it's a *him*?" asked Candace.

"All right," said Hal, a trifle testily. "*She's* sending without direction."

"I didn't mean it that way, Hal honey," Candace told him. "I was just wondering if we hadn't jumped the gun in thinking of our friend as an intelligent entity."

"He, she or it was smart enough to move around that mountain yesterday," put in Truck, from the rear seat. "That took brains."

"Or machinery," said Candace.

"Supposing its nothing more than a *machine*."

"That," said Hal, resting his forearms on the wheel in front of him, "raises some mighty interesting possibilities. Let's say, for the moment, that it *is* a machine. Obviously, a missile—if that's what it is—could have reactors that would enable it to avoid a crash—as with the mountain. But if it is a machine, somebody, or some *things*, had to make it. No intelligent creature would manufacture anything so complex without a purpose, and send it at random through space."

"Maybe it's not from space. Maybe the Commies sent it over to broadcast germs or something," said Truck.

"You think of the loveliest ideas," said Candace. Then, frowning and poking at the sopping ruin of her hair, "If that were true, it wouldn't be answering us—even with mockery. It would be lying nice and doggo. My money—listen to the girl!—says it's from space. If it were a missile that goofed, you can be sure the big brains in the Pentagon wouldn't be kicking up such a fuss."

"Well, we aren't going to solve the problem by sitting here talking about it," Hal said practically. "We've got to hunt until we find it."

"How are you going to do that?" Candace asked.

He told them. They were going

to do it on foot, tracking the valley floor and leaving bits of cloth and direction markers whenever they reached the hills, so they would not be forced to retrace their steps. "That way," he concluded, "we can find out where it isn't, if nothing else."

"We can get good and wet, too," said Truck.

Parsons quelled him with a look, and they got busy. They hardly spoke at all, for their thoughts were now completely immediate, grim and serious.

It was a tedious, unrewarding day of plodding through rain-soaked sand and soil. When, as the sunless daylight waned, they finally returned to the shelter of the jeep, all three of them were exhausted.

"Another two or three days of this," Truck complained, "and my legs will be too musclebound for football." It wasn't what he'd intended to say. It was merely a quick cover-up to conceal his real emotions.

"I think I left my feet on the other side of the valley, last time across," said Candace, falling in with his mood. "Hal honey, where do you suppose it is?"

"It's here somewhere," said Parsons, wishing his own feet would cool off and stop aching. "We just haven't looked in the right places."

"We'd better get back up a hill and do some broadcasting," said

Candace. "I'll cook us some sort of a meal."

"I'm too tired to eat now," Parsons told her. "But you're right." He got the jeep into gear, adding, "Maybe they've found it somewhere else."

"Happy thought!" said Candace. "But it's too much to hope for."

And theirs *was* the only report on the alien. Parsons talked to a General Somebody, who had jetted from Washington, D. C., to Butte that afternoon, to be closer to the critical scene. Apparently, the entire world was in a ferment over the possibility of contact with a messenger from an alien race.

"How are ground conditions?" the general asked.

"Lousy!" Parsons told him bluntly. He gave him a succinct account of the frustrating day the expedition had endured.

"You mean, you actually *talked* with it?" the General asked.

"You could call it that," said Hal, and went into a full explanation.

"Do you think we could get a helicopter in under those blankety-blank clouds?" the General wanted to know. "It would enable us to get a fix on its whereabouts."

Parsons looked dismally at the mist that enshrouded hilltop and valley alike. "Not a chance, I'm afraid," he said. "This stuff is thick and close. We're snafu-ed, *but good!*"

Candace, who was standing by

with a plate of hot food, heard this portion of the conversation and said, "Hal honey, maybe if they could get a plane overhead and they knew where we were, we could rig some sort of a fix on our friend. Ask him?"

"The trouble with that," said Parsons, "is our pal's sending doesn't reach up here. And how are we going to tell where either of us is if we can't see through the clouds?"

"What's that?" the General asked. "What's going on?"

"Mrs. Parsons," said Hal. "She wonders if you couldn't send a plane over tomorrow to help us get a radio fix on our friend."

There was silence. Then, "Tell your wife she gets a large box of filter-tip cigars when this is over. By God! That's the first really constructive idea that's come out of this foulup yet. But it will take a bit of doing. Lucky that stuff over you is not much more than two thousand feet. You'll hear from me in an hour. Signing off and good luck."

"What did he say?" Candace asked eagerly, as Parsons flipped the switch and motioned for Truck to stop cranking the battery.

"He says he's going to give you a box of choice Havana cigars when we get out of this hole, baby," Parsons told her, accepting his food. "Mmm! These beans are good! What did you do to them?"

"Oh—I just let you work up an

appetite, that's all," said Candace. Then her eyes widened. "You mean he's actually going to do it?"

"He's going to *try*," said Hal through a full mouth. He tilted his tin plate to let the rainwater trickle off onto the ground. "If we ever do make sense with this creature, I'm going to ask him to turn off the waterworks."

"Amen to that!" said Candace.

"I was figuring on working up a sunburn that would last all winter," said Truck mournfully.

The general radioed back, on the nose. An air-fix would be attempted the following morning at ten o'clock. It was complicated, but he thought it could be done. "We've got to find that thing—or rather, you have to find it. Are you aware that we have an expedition with Weasels on its way to reinforce you?"

"Weasels!" Parsons was startled. "But we got in here okay in a jeep."

"You couldn't do it now," the general told him. "Those two days of wet weather have washed out all the trails. But don't worry. We'll be getting through to you soon. Just find our friend and see that he doesn't take off before we open communications."

"What's the verdict to date?" Parsons asked. "*Is* it extra-terrestrial?"

"Looks that way. The Russians swear on a stack of Karl Marx *they* had nothing to do with it.

They're talking it up as some new sort of war-mongering frightfulness we've developed. Well, I'll be overhead tomorrow morning."

Once again, there was little sleep in the expedition. But their restlessness was not the result of frustration, unrewarding as their day of effort to locate the stranger had been. There was a sense of impending excitement, of discovery lying just ahead of them, a growing awareness of the importance of the position fate had put them in.

"If they're right," Candace mused aloud, "you and I, honey, are the first two humans ever to communicate with a being from another world."

"What price communication?" said Hal. "We might as well have been yelling our heads off in Echo Canyon."

"How about me?" put in Truck. "Don't I get to talk to it, too?"

"Of course, Truck!" Candace said warmly, reacting with quick, feminine sympathy to the young gladiator's sense of having been left on the outside. "You can talk your varsity team mask off tomorrow."

"Gee—thanks, memsahib," said Truck, feeling his dark inner mood lighten a little.

He retired into silence, apparently considering the effect of his impending importance on certain members of Candace's sex. She and Hal exchanged meaningful

glances. They were both growing increasingly fond of Truck. He might not be cut out for a Ph.D., but his strength and stamina, his amiability and his quick native intelligence made him a valuable member of the closely-knit team they had become.

With the coming of the dawn, they rose and broke camp again. They made another descent to the valley floor, handling jeep and trailer with extra care lest an accident damage their radio gear. Certainly, weatherwise, the situation had not improved overnight. Mist and rain were equally heavy, and the once hard-packed ground was slowly turning into a quagmire. It took them more than an hour to get located on a bit of high ground, where they would not become hopelessly bogged down.

"Let's see if our friend is still sending," said Candace.

They set up shop, and Truck took over the mike. He said, "Hello, out there," and promptly received a "Hello, out there," in response."

Parsons scowled at the set. "If our pal doesn't shut up when the General starts sending," he said. "it's going to be awfully confused."

"We'll manage," Candace said confidently.

The general, as usual, was on time. He said, "I'm somewhere overhead in a helicopter, with another copter standing by. We want

a fix on you, first. Then we'll try for a fix on the alien and at least give you direction."

"Hello out there," said the voice from the stars.

"Who in hell is *that*?" the general asked, startled.

"That," said Parsons, "is our unexplained visitor. You'll have to sift if he keeps cutting in."

"Okay, Parsons—let's get busy," said the general. "Start reeling off a page of statistics—or anything that comes into your head."

Parsons complied with the multiplication table. After imitating him at first, the Whatisit apparently gave up and stopped sending. Ten minutes later, the general's voice came over the receiver.

"We've got you," he said. "Now, see if you can get the owner of that voice."

Parsons raised the unknown visitor, using short, varied sentences. He was, he felt with growing excitement, beginning to learn a little about the alien. Two or three times, when the human speeches were long and intricate, or merely repetitious, it had simply ceased sending. Evidently, some sort of selective mind was at work, determining which phrases merited repetition, and which did not—even though, apparently, none of them made sense to the alien.

"Okay, Parsons, here it is!" said the general. "Got a compass handy?" He gave the directions concisely, and concluded by saying,

"Sorry we can't give you more. We spot you maybe half a mile apart, but our own location is too unstable to give you a clean estimate of distance. If you follow the direction I just gave you, and keep your eyes open, you ought to find him."

"We'll do our best, General," said Hal. Then, sighting along the direction-line he had just been given, he exclaimed in dismay, "Damn! This runs right along the hills on the north side of this bowl."

"You'll manage," said the general, with a confidence Hal, at that moment, was far from feeling. "Good luck. But be careful. He may be dangerous."

"Now he tells us!" said Candace, who had appropriated one of the earphones.

They had to leave the jeep where it was, and scramble, slipping, stumbling, peering vainly through the mist for some sign of the alien. Their progress was abruptly halted when they had covered about a quarter of a mile, and the hillside across which they were moving became split by a sharp declivity.

"It couldn't be worse!" muttered Parsons. "We'll have to work our way around it."

Working their way around took them approximately half an hour. They were about halfway up the gentler slope of the far side when Truck, who had lumbered on

ahead, let out a yell that echoed from crag to crag like a many-throated summons to battle.

"Here it is! I've found it! Come on, you two! I've found it!"

It was big. Although, in some unexplained manner, it had buried itself in the hillside, so that only a small sector of its top-surface showed above ground, the curve of its dull-grey, irregular and knotty metallic surface revealed a diameter of more than twenty feet. There it sat, immobile, apparently harmless—like a large piece of leaden-hued pewter discarded from a New England farmhouse attic.

"We found it! We found it!" Truck chanted, and then suddenly turned deathly pale, as the terrifying significance of the find's brooding stillness and nearness and alienness was borne in upon him.

"Get off at once!" Parsons almost shrieked the words. "You don't know what sort of radiations may be coming from it."

Truck swayed as if in mortal terror and scrambled down. "My God!" he breathed. "I left the Geiger counter back in the trailer."

"Get it," Parsons shot back to him. "*And get the jeep as close as you can.*" Apparently whatever is inside that thing can only communicate through the radio."

"I know—sure," said Truck. "I—I'll be right back with the Geiger."

He had just turned to carry out the order, when Candace uttered a small shrill scream and cried, "Look! Hal, stay back! It's boiling the earth around it!"

Something very strange was happening. Invisible currents were making the once-sandy soil in which the object had settled seethe like boiling water in a kettle. As Parsons pulled his wife quickly away from the area of disturbance, he thought that her use of the word "boiling" had been singularly apt. From a safe distance up the hillside, the three of them watched the ground around the visitor act as solid matter was not supposed to act.

It was Truck who first sensed the visitor's intentions. Stabbing a large grimy forefinger at it he announced, "For Pete's sake, he's coming up!"

They looked on in awe as the dull-grey globe that was not from Earth slowly emerged from its bed of soil, looming larger and larger as it rose, and revealing in what appeared to be its nose a pair of opaque, circular objects that looked like eyes.

VII

THE STAR-TRAVELER already knew, of course, that he was in a valley, partway up one of the sides. The hills bounding it were not particularly high, especially by the standards of this planet. In

fact, the Conservationist had a pretty accurate idea of the dimensions of the Himalayas, distant as they were—though he had been more interested in determining the rate at which they were rising. He gave the local elevations only a passing thought, then sought to examine what lay closer to his vision-outlets—outlets which the Parsons group had quite correctly labeled "eyes."

He failed. The details five miles away were clear and clouds of what must be water or ammonia droplets hanging at still greater distances in the atmosphere were still clearer. But, as he brought his attention to objects nearer and nearer to his ship, they grew, shapeless, and increasingly harder to examine.

Cursing himself for forgetting, he recognized the reason. His eyes were perfectly good instruments—for the purpose toward which they had been designed. They were carefully shaped lenses of calcium fluoride, designed with almost a full hemisphere of field and their curved focal surface was followed faithfully by the photosensitive material of his own flesh. The tiny metallic crystals in his stony tissues would, of course, be affected electrically by light, and, like many of his race, he had learned to interpret the light-images formed by lenses.

There was just one catch. There was no provision for changing

either the shape or the position of the lenses. But actually, why should there be? They were designed to enable him to determine the directions of the stars, whose distances were for all practical purposes always infinite. He had never needed focusing arrangements until now.

The eyes were a foot across and almost as great in focal length. Objects a hundred yards away were blurs. At six feet they were scarcely interruptions to the background. He could just tell, by sight, that there were moving objects in his vicinity, and get a vague idea of their size. Beyond that, details were indistinguishable.

The nearest repair-shop where his machinery could be modified was about six thousand light-years toward the galactic center. He could, of course, pull his flesh back from one or more of the lenses until the eye involved focused at a distance of a few feet—if the situation would wait for the necessary years or centuries. However, even if the situation did wait, the natives and their machines probably wouldn't.

He could wait until they departed, and examine them when they were far enough away. Better than this, he could fly to a distance at which they were reasonably distinct in his sight. The question raised in that connection was, of course, how the natives would react to such a move on

his part. However, if he did not move, he would probably learn nothing. Therefore, he resumed his rise from the soil, cleared its surface, and hurled his vessel half a mile upward.

To observe, and, in effect, to photograph the details of what lay below took only a few microseconds. Then he moved a few hundred yards to one side and repeated the procedure. Three seconds after takeoff, he was settling back into his original location with a fairly clear picture of the strange equipment surrounding it firmly painted in his mind.

He understood now why the seismic impulses had come in pairs. Each of the machines was supported by two struts, which were so hinged as to permit several degrees of freedom of motion. During his brief period of observation, they had traveled enough—away from the point where his ship had been resting—to permit him to analyze their startling method of travel. This seemed to consist in balancing on one strut, falling in the desired direction, and catching one's mass with the other before collapsing completely. The process was repeated cyclically.

It appeared, mathematically, that the value of the planet's gravitational acceleration would put an upper limit on the rate of travel possible by this means. The agent found himself a little

dubious about the engineering advantages of it. If one had to travel on the surface, wheels seemed easier—although an irregular surface might present further difficulties. Few Conservationists, surely, had confronted problems so difficult to resolve.

At least, he had eliminated the last possible doubt that the things were non-metallic, non-electric machines, since he had actually seen them move in a manner which verified and complemented his seismic observations. This implied that the natives were not merely cultured, *but had developed a physical science equal to, perhaps greater, than that of the agent's own race.* The latter was certainly possible, since he had not the faintest idea of what was the operative principle of the devices. It was a disturbing speculation, but he refused to enlarge upon it emotionally. Obviously they had *some* electrical equipment. The signal detector and broadcasting device, as well as the ionization cylinder, were quite evidently as artificial as his own ship. Their science, regardless of its development, could not be entirely alien. It might be possible for him to learn something about it. If so, it was important that he begin—for the equipment needed to stop the moles would have to be obtained from these people in rather short order.

The agent examined once

more, as precisely as his sensory equipment permitted, every detail of the things around him, which were now returning slowly, after their hasty withdrawal. He broadcast his "*Hello*" again, and carefully noted the way it affected the receiver. When the answer came, he checked with equal care the source of the modulating energy.

The result was interesting. The receiver apparently did not consider the carrier waves important. It damped them out and used, through most of its circuitry, a secondary signal consisting of the original modulations. This was caused to vary the strength of a magnetic field which, as nearly as the agent could tell, was used to impart mechanical motion to an object principally non-metallic.

He could get only a rough idea of its size and shape from the space left for it in the mechanism. The evidence seemed to indicate that the whole device simply re-broadcast the modulation of the original signal mechanically into the atmosphere.

He knew, of course, that a gas *could* carry compression waves, though it had never occurred to him that they might be of any particular use. He had simply never stopped to wonder why his method of digging was more effective on a planet with atmosphere. It did no good to blame oneself for such oversights when

the fat was in the fire. Anyway, he was sure of one thing. The waves were being used to carry the signals controlling the machines. Certainly no others were.

They also served for communication, since similar waves appeared to be received by the same disc in the signal device, and were used to modulate its broadcast electromagnetic impulses. This process seemed pointless, except as a means of long-distance communication. Probably pressure waves did not transmit energy so effectively through a gas as electromagnetic radiation carried it through space. So far, so good.

It all tied in, more or less, with the evident fact that these machines were not electrical, even if it did not begin to explain how they actually worked. Some sort of more precise analysis would, of course, be needed. The metal he could detect about the things seemed quite purposeless, and he did not see that it was likely to help.

It was present in small, disconnected bits and was devoid of electrical energy, if you brushed aside the minute currents generated by its motion in the planet's magnetic field.

The machines, then, were made virtually entirely of non-conductors, and should be about as easy for the agent to examine as a device consisting exclusively

of gas jets and magnetic fields would be for a human being.

This meant that the analysis would have to be by highly indirect methods. A chemist, with his laboratory machine, might be able to do the job in microseconds. But a traveling device, like the scoutship, had no equipment designed with any such purpose in mind.

He suspected that this was one of the situations where the sensible members of his race—the great majority—would leap at the chance to show their superiority over one who was bound to a machine. It had always been that way. It was a common enough feeling among those whose lives were primarily intellectual. The doers, like the agent, countered it with a clear recognition of the necessity for their work. At the moment, however, the agent rather wished that a normal person had been present, to show his intellectual superiority.

Then he realized that his own possession of machinery did not disqualify him as an intelligent being. If a member of his race could solve this problem, it was as likely to be himself as anyone else. He would have to use *all* his knowledge, of course, not just the specialized information which was all the millennia of flight demanded.

Enough knowledge should be there. He had, of course, been

young when he had elected this life, but he had had much thinking time before his career was actually begun. Also, there had been a good deal of time to think as he drifted among the stars, and opportunities to gather data that planetbound thinkers had never possessed.

He would have to go back to the most elemental principles of thought—if he could. First, he had decided, on the basis of what seemed adequate evidence, that the planet was inhabited—that its inhabitants used machines and, therefore, had freedom of motion—and that these machines were based on a technology almost, but not quite wholly, alien to his own.

Nevertheless, the devices must operate under the same physical laws that obtained elsewhere in the universe. This meant that they must take in some form of energy, must perform a desired action, and must eventually account for the energy as heat.

The energy was not electric or magnetic, since he could have detected the presence of that kind of energy directly. It was not gravitational, since the gravitational potential of these machines—when measured as a function of their distance from the planet's center—had actually increased since he had first detected them. It was barely possible, of course, that some *primary* source beyond his detection-range might work on

such a basis. But for the moment that hardly bothered him. It could be filed away for future reference.

There was almost certainly no direct mechanical link with a distant energy source. He felt sure that he would have *seen* any such, during his brief trip aloft.

Chemical energy, however, remained a distinct possibility. Normally—which usually meant, he reflected wryly, circumstances in which intelligence had not taken a hand—chemical reactions were too slow to provide useful energy, even though they were responsible for life. However, on a planet infested with such weirdly active carbon compounds, it would not do to be dogmatic on the matter.

It was known that reactions, in such circumstances, did go with enormous speed, though little actual quantitative work had been done on the matter of the energy involved. It was quite conceivable, in any case, that there might be some method of turning chemical directly into mechanical energy, without involving electricity as an intermediate stage.

Looked at from this viewpoint, several more possibilities as to the planet became evident. Its natives could survive, either by nature or intelligent adaptation, in an oxygen-rich atmosphere. Oxygen was one of the most virulently active elements in existence. Hence, it might not be too sur-

prising to find such a people developing a chemical technology and bypassing the electricity a living creature should logically use—but wait. They had *not* bypassed electricity.

There were auxiliary machines, among the vehicles facing him, which did use it. Perhaps, these people had originally developed a normal technology, but, for some unaccountable reason, had never mastered space-flight! That was more than likely, if one assumed they did not merely tolerate oxygen, but *needed* it.

In that case, they would inevitably exhaust, in a relatively short time, the metal resources of a single planet.

They would be faced with the choice of developing machines that did not make demands on the metal supply, or of sinking to barbarism during the millions of years it would take new metal deposits to concentrate to usability.

This race might have succeeded in accomplishing the former—in which case, the exhaustion of the local ore veins could not be blamed on the poachers after all. The marauder might have planted the torpedoes in momentary pique, believing that a regular freighter had been there first and hoping to throw the production schedule of this planet out of step with that which had been recorded for it.

It was a very attractive idea,

but the agent decided he should not go quite so far in pure speculation. There should be other possible sources of energy besides chemical activity, promising as such energy appeared to be. He could, for example, detect a pressure against his hull which seemed to be due to currents in the atmosphere. These must necessarily carry energy, though it seemed, at first estimate, that it could hardly be quantitatively adequate to run these machines.

There was nuclear energy. Obviously, these aliens did not use it directly, yet the possibility remained that it was their primary source and was stored in some non-self-destructive form within them. Strength was lent to this possibility by the presence of the ionization tube, which might well be used to locate radioactive materials. If, of course, the normal senses of the creatures were inadequate for the task. Atomic energy not under rigid control was always a rather frightening thing to contemplate, and he did not dwell on certain other unlikely possibilities concerning it.

He had already thought of solar energy, but had seen nothing to offset any of his earlier objections to this theory. On the whole, the chemical idea seemed the most worth following up.

He searched his memory for the little he knew about the high-speed chemical reactions of free-

oxygen environments, and found a few helpful items. For one, they *did* involve solar energy—they employed it usually in breaking down water. The oxygen was freed to the surroundings, and the hydrogen combined with oxides of carbon to produce carbohydrates.

These, in turn, could react upon each other, with simple compounds and with some of the free oxygen, to produce incredibly complex substances whose detailed structure had never been worked out by any chemist of his people. This situation should, of course, result in a continual increase of free oxygen in the planet's atmosphere at the expense of the water.

Observation indicated that, actually, an equilibrium was usually attained in this respect. Whether the oxygen re-combined spontaneously with the hydrogen in the compounds, or whether still other high-speed reactions, of the same general type as the photo-synthetic ones, did the trick, was still a matter of debate. Even the agent could understand, however, that the combination of oxygen with almost any of the complex carbon-hydrogen compounds would return the energy originally supplied by the sun.

If the compounds had any reasonable density, it should be possible to store quite a fuel supply in a very small space that way, using atmospheric oxygen to com-

bine with it whenever desired. Even without precise figures, he felt sure that this would constitute an adequate energy-source for the machines he had been watching.

Was there anything he had overlooked? No—he was nothing if not thorough when he undertook a task of objective scientific analysis. A doer had his own pride to safeguard, and if he was not an intellectual in a strict sense, he did possess a first-rate mind.

How could this theory be checked experimentally? If it proved correct, there should be, somewhere on or within these machines, a store of hydrogen-carbon compounds. They should be absorbing atmospheric oxygen at a fairly high rate. And they should be exhausting water and, possibly, oxides of carbon.

He had no means for recognizing the hydrogen-carbon compounds, even if he found them, so there seemed little point in trying to take one of the mechanisms apart. No point even if its operator proved willing to allow it. However, there seemed to be a possible way of attacking the problem through the other facts. If an oxidizing reaction of the sort he had envisioned went on in a confined space, what would happen to the pressure? He pondered the problem.

Producing solid oxides would reduce pressure by removing oxy-

gen. The formation of carbon dioxide would leave it unchanged, for there would be the same number of molecules after the reaction as before. Making water or carbon monoxide would give a pressure increase, since each molecule of oxygen would go into two molecules of the product.

All this, of course, assumed that water and the oxides of carbon were gases at this temperature. The method offered him two out of three chances of learning something—better, really, since it was likely that two, or all three, of the reactions occurred together. Only if CO_2 alone were produced, would there be a negative result. The catch seemed to be how one was to seal one of these devices in a gas-tight container, with a limited amount of atmosphere?

The container, of course, was available. His own ship had a good deal of waste space, left deliberately to allow for later modifications, if and when they were developed. He could open his hull for maintenance at virtually any point, and the openings were naturally designed to seal gas-tight, since his occupation was more than likely to lead him into corrosive atmospheres such as this.

He would have to be sure that he let the planet's air only into chambers where it could not reach either his own tissues or the ship's circuitry. No, wait. The test should take only minutes or

hours, not years. Both his flesh and the silver wires could stand oxygen that long, and he could get rid of it later by opening the hull to the vacuum of space. That made matters easier—much easier.

But how could he detect the change in pressure, if it did occur? He did have manometers, of course. But they were vented to the outside of his hull. No one had foreseen a need for measuring internal pressure. He would have to do some more hard thinking.

What effects would pressure produce, besides merely mechanical ones? There would not be enough change, in the electrical properties of the exposed wires, for even the agent to detect. The change would probably not be fast enough to alter the temperature noticeably. And even if it did alter it, he would not be able to tell whether the change were due to gas laws, or simply the operation of the machine.

In the temperature range of this world, it was not really certain that all the products were gaseous, anyway. The mere fact that he had detected them in that form, during his approach, meant nothing. The infra-red spectrographic equipment he had used would have picked up trace quantities. It was unfortunate that its receivers were also aimed outward.

The agent could not, for the life of him, recall the vapor-pressure curves of any of the expected products—though, come to think of it, *something* was liquid here. The clouds he could see proved that, as did their precipitation on his half. He could not assume that it was one of the products he sought, however, and his best bet was still to maintain pressure change. If he could do it . . .

VIII

STUNNED, SHAKEN, the three humans stared at the star-traveler which had now so unbelievably and unexpectedly revealed itself in full. And the star-traveler stared back at them through its dull, opaque vision windows.

It was Candace Parsons who spoke first. "Why!" she exclaimed in a strained, oddly small voice. "Why—it looks like a gigantic bathysphere! Maybe . . ." she fell silent.

Hal Parsons, ignoring the rain that streamed down his face, said, "Maybe what, baby?"

"I don't know." Candace's voice remained off-pitch, tremulous. "I guess I was thinking that maybe—if he *is* from outer space—our atmosphere is like an ocean to him. Maybe he *is* a bathysphere."

"Why do you refer to that thing as *he*?" her husband asked sharply. "Whatever is inside probably

has no more concept of sex as we know it than an amoeba."

"I don't know. I really don't know, Hal." Candace mopped the rainwater from her face with a khaki towel she had brought from the jeep. "I don't know, but *he*—just *seems* masculine somehow."

"If that's a bathysphere," put in Truck MacLaurie, with a forced attempt at levity, "I'd surer than hell hate to take a bath in it. How would I ever get out?"

"*Truck!*" said Candace, biting her underlip. "Don't you honestly know what a bathysphere is?"

"Isn't it a round bathtub?" Truck asked.

"For your information," Candace said, more to herself than to the young man who had blundered, "A bathysphere is a globular device designed by William Beebe for deep underwater observation. Professor Piccard later used an improved model to—"

Her husband, who kept his eyes riveted on the alien visitor, suddenly leapt at her and pushed her flat on her face against the hillside. As he did so he yelled at Truck, "*For God's sake, flatten out!*"

The alien was on the move. There could be no doubt about it this time. Candace, her face ashen, felt the near-earthquake vibration emanating from the advancing sphere and looked up, barely in time to see it zoom sky-

ward, leaving boiling earth and mud in its wake.

The alien's rise was as rapid as the pursuit-foiling lifting processes attributed to flying saucers in the nation's press. He shot up a thousand feet—two thousand—and again they smelled the acrid aroma of metal heating up unbearably from friction with the atmosphere.

Feeling a sudden, shocking, incongruous disappointment, Candace cried, "Oh—he's getting away! *He's leaving Earth.*"

"No he isn't," said Truck, staring grimly up into the rain. "Get a load of *that!*"

That proved to be a sudden lateral maneuver on the part of the alien. It moved several hundred yards sideways and again was immobile. It was apparently as capable of remaining immobile in the atmosphere as it had been immediately following its self-burial in the rocky soil.

Candace could see the great round eyes, reduced to mere dots in the distance, trained steadily upon the three of them. She experienced paralyzing fear. It was obvious now that the alien failed to welcome close contact with humans, and was determined to resist investigation.

Secondarily—but no less frightening—was the thought that, being an alien, it could scarcely be expected to have humanitarian sympathies. It would probably be no

more hesitant about wiping them out than most people were about destroying bothersome insects.

She glanced at her husband for reassurance, but saw in his fear-shadowed eyes a reflection of her own fears. She had learned, long ago—in high-school biology—that the legend of a snake's ability to paralyze a bird-victim with an hypnotic stare was utterly false. Yet Hal's trapped gaze failed to refute that ancient tale. His eyes remained fixed upon the strange object hovering almost motionless above them, half-veiled by a mist of its own creation.

Then, suddenly, Candace screamed. The alien was returning, swooping directly down toward them with the speed of a V-2. Before the echoes of her scream could dwindle and die away, it had landed—not upon them but in its former resting place. It perched there lightly, dominating the immediate landscape, its opaque twin lenses still fixed implacably upon them.

It was Harold, lifting himself slowly from the rain-soaked ground, who said, "Now I wonder just what in hell was the precise purpose of that maneuver."

Candace, close to hysteria from the backlash of terror and shock, replied, "You might just as well ask why such a creature does anything?"

"Funny thing," said Truck, brushing mud from the front of

his clothing. "I think it wanted a better look at us. Did you notice the way it kept those fish-eyes on us all the time it was dancing that rock-'n-roll over us?"

"I noticed," Harold Parsons replied tersely, his face still drained of its natural color. "What beats me is why it had to hop around like that."

Truck frowned at the looming bulk of the alien. Then he looked at his companions and rubbed the bristles on his chin. "Funny thing," he repeated. "I'm completely sure now it wasn't trying to scare us."

"Then just what do you think it *was* trying to do?" Candace asked.

Truck had latched on to something and, bulldog-like, he was not giving it up. "This probably won't make much sense to you egg-heads," he told them, in his Southwestern drawl. "But the way that thing acted reminded me of an uncle of mine. His eyes aren't as good as they used to be, and he won't wear bi-focals. When he wants a good look at anything close-up, he has to pull his head back. Do you know what I mean?"

"If your uncle looks like that," said Candace, with a tremulous nod at the alien, "it's no wonder you're having trouble with your credits."

"Hold it, baby," said Hal, regarding MacLaurie with something like awe. "I think he's got something. Take a good look at those

things our friend sees with—if seeing is what they're for. Its eyes are set at much too flat a curvature to enable it to see anything small and close up without some sort of focusing agent. I can detect no evidence of its having any. In that case . . ." He paused.

"You mean, I'm right?" Truck asked incredulously.

"I mean you could be," said Parsons. "Nice going, Truck."

He looked thoughtful for a moment, and then he added, "If it really *is* a space-traveling machine of some sort—and the evidence to date makes that highly probable—then its eyes would be designed for judging objects of immense size, immense distances away. It would need no focusing devices."

"All right, you two geniuses," said Candace, who had recovered a small measure of her equilibrium, "if it really is a space-traveler, why would it have to resort to such extremes just to get a good look at us? Surely it has all kinds of other senses—or instruments for measurement. If not, how could it have gotten here in the first place?"

Harold Parsons fished a limp cigarette from an equally limp pack in his breast pocket. He eyed it in disgust and quickly tossed it away. "Has it occurred to you, baby, that it may not be *that* simple?" he asked. "If its vision equipment is so faulty under Earth-

conditions, it undoubtedly is faced with other problems."

He paused, wiped his forehead briefly dry, and added, "I'll stake my Ph.D. that we're just as big a problem to our friend as he is to us. We know that it is capable of radio communication by voice. But, so far, all that it has been able to communicate is the fact that it can indulge in parrot-like mockery of our speech."

"Hey!" said Truck, who had been listening attentively. "You mean it hasn't made sense out of what we were saying."

"What do *you* think?" said Parsons.

Candace said, "You know, this may be silly, but it makes me think of a movie I saw once—one in which an explorer on a strange island had to learn to get on with the natives by pointing out objects and then repeating over and over their speech equivalents. The natives had to do the same thing."

"You saw it once? I saw it six times," said Truck. "The guy kept pointing at trees and rocks, and describing them in English."

Hal Parsons threw the pack after his discarded cigarette. "Probably it was Robinson Crusoe!" he exploded. "But, once again, Truck, you and Candace could be on the nose. The only trouble is—I don't believe we managed to impart much information while our pal was zooming about." He paused,

adding with a frown, "There's only one way to find out."

They plodded back to the jeep. Truck cranked the battery, while Parsons got the radio transmitter into operation. This time, he didn't have to speak first. The moment the receiver was working, he could hear his own voice coming through the earphones in a reiterated, "Who's that? *Hello!* . . . Who's that? *Hello?*"

Parsons acknowledged, with, "Hello out there. We were watching you just now."

Back it came. "Hello out there. We were watching you just now."

Infuriatingly, frustratingly, it went on—meaningless repetition following meaningless repetition. Finally, as before, Parsons had to give it up in disgust.

Candace produced some dry cigarettes from the expedition stores, and she and Hal smoked them silently, under the shelter of the jeep-top. Truck, who was in training, did not join them. It was a damp, disheartening breathing spell.

Finally, Candace said, "Well, remember Valley Forge. It's always darkest before the dawn."

"Frankly, I'd rather not think about Valley Forge right now," said Parsons unhappily. "If that thing isn't able to make sense out of us unless it sees us, and it *can't* see us—how in hell are we going to make sense out of it? I think we'd better get help from outside

—if we can. Okay, it's uphill for us again."

"Maybe not," said Truck. "Listen."

They heard the faint thrum of plane engines coming through the overcast, maintaining itself, growing louder. Parsons threw his cigarette away and said, "Come on, Truck. Let's get going."

It was the general again, anxious to know how they were making out. Parsons told him in terse syllables. Truck looked up from his battery-duty and said, "Getting anywhere, Sergeant?" And was rewarded by a shut-your-mouth gesture.

Parsons said, "I know it's tough. But you must be able to get through to us somehow. How about dropping a couple of philologists by 'chute?"

"We may have to," was the reply. "But only as a last resort. Blast this rain! But you're doing okay, Professor. Stay with it."

And that was that. It was a gloomy threesome that made its way slowly over the soggy hillside from jeep to alien. They walked slowly around the alien, and then stood in front of it, regarding a little more calmly now the disc-like, too-flat lenses that had gone opaque again.

"I wonder if it can see us at all from this distance," Parsons mused. Then, irrelevantly, "You wouldn't think, with all the resources of modern science *and* the Air Force,

they'd let a little rain stop them cold."

"It isn't a *little* rain," said Candace, who had been listening to her husband's colloquy with the general through one earphone. "It's a lot of rain—and it has raised hob all around here. The soil and rock formations aren't used to so much moisture. They just can't take it."

"Let's hope we can take it a while longer," said Parsons, putting an arm around her and squeezing.

"Don't, honey," she said. "I just can't take it right now."

"*Hey!*" called Truck, who had been eyeing the monster from a bit to one side. "Watch it! Something's happening!"

IX

As usual, the solution was ridiculously simple, once the traveler had thought of it. Most of the access-doors in the hull opened outward and all were operated electrically. He had perfect control over the current supplied to their operating motors. He knew that if he refrained from latching one or more of the doors, and simply held it shut with the motor, he could sense directly the amount of effort needed to keep it sealed against the internal pressure.

As far as he was concerned, it was a quantitative solution—if the pressure increased. If it decreased

—well, he would know it, from the extra effort needed to open the door. He was concentrating on immediate small details now—and very wisely.

With his machine, action could follow thought without delay. The moment he had his answer, a door swung open in the side of the great metal egg he was driving, and Earth's air poured in. Good as his seals were, the ship had not, of course, retained any significant amount of gas in the millennia it had been in space.

He did not bother to develop a plan for enticing one of the machines through the opening. He assumed, quite justly, that any intelligent mind must have a fair proportion of curiosity in its make-up. The fact that self-preservation might oppose this influence did not, as far as the agent knew or suspect, apply to the present situation. The risk of sacrificing even an expensive remote-controlled machine should be well worth taking in such circumstances. He simply waited for one of the devices to be driven into his ship.

Before this happened, however, there was a good deal of conversation among the machines present and, he presumed, the distant broadcaster—if, of course, it could be called conversation. The agent was still unable to reconcile this supposition with the absence of intelligent life in the present group.

At last, however, the expected

event occurred. One of the machines swung about and moved toward the opening in the hull. Just outside, it halted, and the agent guessed at a brief burst of atmospheric pressure waves, though his manometers did not react fast enough to catch them. Then it entered.

It traveled on four struts instead of two. It became completely horizontal and advanced on the supporting struts. Evidently the upper ones, which the agent had seen, could be used for locomotion when desirable. Its entrance was slower than by its usual rate of motion, though the agent could not imagine why. The suggestion that slower motion made detail observation easier would never have occurred to a being whose perception and recording operations occupied fractions of a microsecond. Whatever the reason for the delay, it finally managed to get inside.

The agent wasted no time. Ready to observe anything and everything that resulted, he shut the access hatch.

Results, by his reaction-time standards, were slow—additional evidence that remote control was involved. The electromagnetic unit burst into activity the instant things finally began to happen. Some of the machines outside began to tap on the hull with dimly perceptible solid fragments, apparently pieces of silicate rock. The agent tried to find regularities in the blows

that might be interpreted as communication code of some sort. He failed.

One of the devices, standing a little distance away, moved one of its attached fragments of metal until a hollow cylinder—which formed part of it—was in line with the hull. After a long moment the more distant end of the cylinder filled with gas, sufficiently ionized to be clearly perceptible to the alien.

The gas must have been under considerable pressure, for almost instantly it began to expand, driving before it a smaller fragment of metal which had plugged the tube. This fragment became progressively easier to perceive as its speed through the planet's magnetic field increased.

It emerged from the near end of the cylinder with sufficient momentum to continue in a nearly linear course, until it made contact with the hull. The agent watched with mounting excitement as it flattened, spread out and finally broke into many pieces. Incredible! He analyzed it, both electrically and mechanically, from the way it broke up. But he could make no sense of the operation.

After a time, the pounding ceased, and the two machines remaining outside drew together. No obvious activity came from them for some time.

Inside the hull, more interesting, possibly more understandable,

events were taking place. The moment the door had closed, the machine trapped within had attempted to withdraw. Its action was a trifle faster than that of the ones still outside. The agent could not decide whether this meant that the escape reaction was automatic, or that a distant controller had turned his attention to the captive machine first.

It had pounded aggressively on the inside of the door in the same seemingly planless fashion as its fellows. Then it had slowed down, and began to move another of the strangely fashioned pieces of metal distributed about its frame. This abruptly became clearly perceptible, as an electric current began to flow through portions of its structure.

The source of the current was a seemingly endless supply of metallic ions—quite evidently chemical energy could be used for something. The current's function was less obvious, since it was led through a conductor whose greatest resistance was concentrated in a tight metal spiral.

This must in some way have been shielded from atmospheric oxygen, since, while it must have reached a fairly high temperature if the ion cloud around it meant anything, it nevertheless remained uncorroded. Heating the wire seemed all that the device accomplished—the agent refused to believe that the ion cloud was intense

enough to help either in action or perception. The light and heat radiated were inconsiderable, but—*wait!* Perhaps that was it—perhaps *this* machine had eyes!

The agent examined the electrical device more closely, and discovered that part of its uncharged structure consisted of a roughly paraboloidal piece of metal, which must certainly have been able to focus light into a beam of sorts.

A few moments later, it became evident that it did just that. The agent's body was exposed in several places in this part of the ship, and, time after time, one part would be struck by radiance, while the rest were in more or less complete darkness. Furthermore, a few minutes' observation showed that when the machine moved at all it followed the direction in which the light beam happened to be pointing at the time.

Sometimes it did not move, though the beam kept roving around the chamber. The agent deduced from that one of two things. Either the device had several eyes, or the one it had was movable over virtually the entire sphere of possible directions. The thing was making an orderly survey of the interior of the space in which it was trapped. But it was carefully refraining from touching anything except the floor on which it stood.

That portions of this floor con-

sisted of the agent's tissue made no difference to either party—as far as either knew. But the agent began to wonder how much of the exposed machinery of the ship would be comprehensible to the presumed distant observer.

Still more, he wondered how this presumed observer maintained contact with his machine. There was no energy whatever—in any form that the agent could detect—getting through his hull, either to or from the trapped machine. A minor exception to this might be the pressure waves generated by the stones striking his hull. But he had already failed to find in these blows any pattern at all, much less one which could be correlated with the actions of the machine inside.

Naturally, the thought that this might be an automatic device, similar to the mole robots, could hardly help occurring to the Conservationist. If this were the case, its present behavior was far more complicated than that of any such machine he had ever encountered. But hold on—he had already faced the implications inherent in that idea. So the technology of this world was more advanced, in some ways, than his own. There were still things the natives didn't know—things which would most certainly hurt them. Any concern he might have felt about himself was drowned in this larger solicitude.

He wondered whether he could so operate any of his own machinery to or through his prisoner, so as to convey a message of any sort. Certainly, if it used light as a vehicle of perception, it could detect motion on the part of the relays. For example—they were larger by quite a margin than the wave length of the radiation the hot wire was emitting in greatest strength.

There were several hundred thousand of them in the dozen square yards exposed to the direct-line vision of the captive, which should be enough to form some sort of pattern. Some sort of pattern, that is, if their owner could figure out how to operate them without making the ship misbehave.

He was still pondering this problem, along with the question of just what *would* be a meaningful pattern to the operators of the machine, when his attention was once more drawn to the outside.

The machines there seemed to have taken up a definite course of action. They had once more approached the hull, and were doing something to it which he could not at first quite understand. It quickly enough became evident, however. The brightness of the images he was receiving through the eyes, to which he had naturally been paying very little attention, began rapidly to decrease.

Within a minute or so, the lenses ceased to transmit at all.

His tactile "sense" consisted in part of the ability to analyze the response of his hull to the vibrating impulses he applied to it. If such impulses were followed faithfully he could be sure that there was no mass in contact with the surface. On the other hand, if they were damped to any extent, he could form a fairly accurate idea of the amount and even some of the physical properties of such a mass.

In the present case, he discovered almost instantly that his eye lenses had been covered with a most peculiar substance. It not only adhered tenaciously to them, but seemed to absorb without noticeable reaction the same vibrations which had sent the soil dancing out of his way like summer chaff in a breeze. This did not particularly bother him, since the eyes were nearly useless for watching the machines anyway. But he kept trying to shake the material off, while he considered the implications of the move.

One was that the machines depended, far more heavily than he had suspected, on the sense of sight, and must suppose that he did likewise. Another was that they were about to take measures which they did not want observed by him. He did not worry seriously about anything they could do to his ship, but he began to listen

very carefully for their footsteps all the same.

Another possibility was that they simply did not want him to fly away with the captive machine. To a race dependent upon sight, no doubt the idea of flying without it was unthinkable. He wondered, fleetingly, whether he should move a few hundred yards, just to see what effect the act had on them. Then the actions they were already performing caught his attention, and he shelved the notion. He became alarmed at what appeared to be an abrupt change of plan.

Two of the things were leaving the neighborhood, in a direction more or less toward the other electromagnetic radiator. Making allowances for the difficulty these machines apparently suffered in traveling over uneven terrain, the agent felt reasonably sure that this was their goal. The other two remained near him and settled down to relative motionlessness, as nearly as he could tell. He comforted himself with the thought that whatever plan they were attempting might demand some time to mature.

Perhaps the departing machines were going after additional equipment, though it appeared their goal might be attained more rapidly by sending other machines from the control point. However, it was quite possible that no others were available—such was likely enough

to be the case on any of his own worlds, where only one individual in five hundred was machine-equipped, and over half of these were incapable of locomotion. Pride swelled in him at the thought, but he dismissed it as unworthy.

His soliloquy was interrupted by something that had not happened to him since his ship had first lifted from the world on which it had been built. The incident itself was minor, but its implications were not. The hull vibration, which he was still applying near all of his above-ground eyes, *stopped* near one of them.

He had not stopped it. The command for the carefully planned motion pattern was still flowing along his nerves. It should have been inducing the appropriate response in a fairly large group of relays. Something had gone wrong, and it produced a sudden crisis in his thinking.

The ship, of course, was equipped with a fantastic number of test-circuits, and he began to use them for all they were worth. It took him about three milliseconds to learn a significant fact. All the inoperative relays were close to, or actually within, the compartment where the captive machine was located. Closer checking showed that the trouble was mechanical—the tiny switches were being held in whatever

position they had been in when the trouble struck.

Worse, the paralysis was spreading. It was spreading with a terrifying rapidity. The basic cause was not hard to guess, even with the details far from obvious. The agent instantly unsealed the door barring his captive from the outside world, and felt thankful that the controls involved still functioned.

The thing lost no time in getting out, and the pilot lost even less in getting the door securely sealed after it. For the time being, he completely ignored what went on outside, while he strove to remedy the weird disability. He was far from consoled by the thought, when it struck him, that he had proved what he wanted to know.

Something solid had blocked the relays—had, more accurately, *formed around* their microscopic moving parts. Whatever it was must have come in gas form for he would have felt the localized weight of a liquid, even inside. Most of the interior of his ship, as well as his own flesh, was still far colder than the planet on which he was lying.

Quite evidently one of the exhaust products of the captive machine, released as a gas, had frozen wherever it touched a cold surface. It might have been either water or one of the oxides of carbon. The agent neither knew nor cared. He proceeded to run as

much current as possible through all his test-circuits, with the object of creating enough resistance-heat to evaporate the material.

The process took long enough to make him doubt seriously that his conclusion could be correct. But eventually the frozen relays began to come back into service. He could have speeded up the process, by going up a few miles and exposing his interior to the lowered pressure, and he knew enough physics to be aware of the fact.

It spoke strongly for the shock he had received that he never thought of this until evaporation was nearly complete. It was lucky for his peace of mind that he never realized what the liquid water formed in the process might have done to his circuits. Fortunately, formed as it had been, it contained virtually no dissolved electrolytes and caused no shorts.

He realized, suddenly, that he had permitted his attention to stray from the doings of the nearby machines for what might be an unwise length of time, and at once resumed his listening. Apparently, they were still doing nothing. No seismic impulses were originating in the area where he had last perceived them. That eased his mind a trifle, and he returned to the problem of the material covering his eyes.

This stuff seemed to be changing slightly in its properties. Its

elasticity was increasing, for one thing, and the change seemed to be taking place more rapidly on the side from which the air currents were coming. The agent could think of no explanation for this. He tried differing vibration patterns on the stuff, manipulating them with the skill of an artist—but a long time passed before he had anything approaching success.

At last, however, a minute flake of the material cracked free and fell away—and *he could really see! He could actually make out what was going on!*

X

TO UNDERSTAND what had gone on outside the alien to cause all this on a purely human plane, an observer of the whole would have had to go back to an earlier event entirely of Truck's doing.

As Truck spoke, something very definitely was happening to the visitor from outer space. Following the young athlete's pointing forefinger, the Parsons saw, with astonishment, that a section of the globular metal body was slowly, steadily opening—or was being opened.

It was circular, perhaps two feet in diameter, and its opening looked unexpectedly simple for a creature, or a machine, capable of interstellar flight. A section of the full, or outer body simply dropped

open and outward—apparently on hinges.

"Like dropped underwear," Candace murmured, to be instantly quelled by a severely reproving look from her husband.

His expression remained firm.

"I know what you're thinking," he told her. "It seems too simple. But consider this. Any alien using such a device on a strange world must be damned well capable of protecting itself."

"Maybe it's an airlock," suggested Truck.

"Maybe," said Hal Parsons, "but don't bet on it. It could be anything. We don't know enough about the nature of this—" He stopped, as Candace clutched his sleeve. "What is it, baby?" he demanded.

"Hal honey," she said, panic returning to envelope her like a torrent of water far colder than the rain. "Hal, honey, do you suppose it's coming out?"

"It!" Truck suggested. "Why not *them*. Why not some of those little green men that flyboy was talking about."

Parsons stared apprehensively at the opening in an effort to penetrate the darkness within. But he could see nothing—not even a shadow advancing toward them or hovering motionless in the gloom. He looked oddly at Truck and then began to lead his wife toward the jeep.

"Come on, Candace," he said.

"We'd better get the rifle from the trailer—just in case."

For an instant, Candace hesitated. She was a self-reliant, wholly modern girl, proud of her ability to handle herself as well as any man, in almost any situation. But her self-reliance crumbled when she looked again at the alien—huge, globular, impervious—with the ominous, gaping door part way up one of its flanks. This, obviously, was not a situation to be handled with reckless assurance.

She said, "Okay, honey," in a very meek voice.

Parsons said, "Better stick with us, Truck."

"I want to see what's going on," said MacLaurie, in his easy drawl. "Anyway, I don't figure our little pal here means any harm."

"Just how do you figure that?" Parsons asked sharply.

"If it was going to hurt us, it would have done so long before this," was Truck's sage reply.

"Don't be foolish, Truck," said Candace in an urgent tone. "It may have been merely softening us up before it opened that door."

Truck silenced her with, "I've a hunch you've been reading too many science-fiction stories lately, Candace."

"Hold tight then until we get back," Hal commanded. To his wife, in a lower voice he said, "I don't like leaving him here, either. But his mind's made up,

and someone had better keep an eye on it."

"If that's *all* he does," murmured Candace.

"What's that?" her husband demanded. "What do you mean?"

"Nothing, honey," she said. But so great was her concern that she glanced several times over her shoulder while en route to the trailer. Fortunately for her peace of mind each time she looked the situation remained unchanged. Truck still stood there, his hands at his waist, his head cocked a little on one side as he regarded the menacing wide-open door.

"Better hurry, honey," she urged as they neared the jeep. "Something we can't cope with may happen any moment now!"

"So far, damn little has happened," grunted Parsons. "I'm beginning to wish it *would* do something menacing. This stalemate is getting on my nerves."

"I'm not so much worried about what *it* may do," said Candace. "At least, not right now. It's what Truck may do that's got me frightened."

Hal looked at her skeptically. But he speeded up his motions nevertheless. He got the canvas-covered Winchester out from under the trailer tarpaulin, stuffed a box of bullets into a pants' pocket and began hurrying back towards the hillside almost at a run.

They were two-thirds of the way towards their destination when

Candace, tagging and slipping a little at his heels, again gripped his arm convulsively and said, "Hal, he's going to do it. *He's going inside!*"

Parsons stopped dead in his tracks and yelled, "*Truck!* Stay where you are! Do you hear me? Don't go any nearer until we get there!"

As they watched, appalled, Truck MacLaurie looked over his shoulder at them. For a moment his grin flashed in the rain. Then moving with a deliberation that masked the speed he was employing—a trick his opponents on the football field had learned to rue, he moved directly toward the round, open door in the alien's flank, hoisted himself up to it, wriggled a moment or two and vanished inside.

A moment later, his deep voice rumbled at them through the rain. "I'm all right!" he shouted. "Don't worry!"

It was then that, without sound or warning, the open door in the alien's flank swung shut, sealing Truck inside.

Hal and Candace exchanged appalled glances and began to run toward the ship. Candace sprinted, stumbling and gasping, directly toward it. She would have hammered on the alien metal barrier with her fists had Hal not restrained her.

"Easy," he said in tones that suggested calmness maintained only by the greatest effort. "Easy,



baby. There's no sense of all of us walking into a trap until we see what can be done."

"But I can *hear* him!" she cried. And at that moment audible sounds of something banging on the inside of the alien trap could be heard.

"Hold it, honey," said Hal. He continued to restrain her until, finally, she gave up, her face white with horror beneath the mud that caked it. Then he picked up a couple of loose stones and fired them, hard, one after the other at the portion of the hull where the door had opened.

"I tried to tell you we shouldn't have left him," she burst out, looking wildly around for some stones to throw herself. "Honey, we're *responsible* for him. We should have made him come with us."

"It's a little late for that now, baby," said Parsons, breathing heavily as he let fly with another stone.

Inside the alien ship, Hal felt for a moment like a soft-bodied larval insect cruelly encased in a metallic cocoon. The impulse that had moved him to enter the door had been irresistible. It had occurred to him, even before the Parsons had given him his opportunity, that if an alien ship offering such an invitation took off unvisited he would regret it for the rest of his life.

More than anything else he was motivated by the thought of what

a certain little red-headed coed back on the Montana Mines campus might have to say about it. Competition was heavy where that girl was concerned—and as far as Truck could see at the moment, running second would make life insupportable.

He had tried to remind himself of both the danger and idiocy of disobeying Parsons' warning. But—and this was true even with professors—Truck seldom troubled himself with the various levels of college teacherdom. Parsons, to Truck, was like most faculty members, tending to be overcautious about almost everything. A fine character, but *too damned careful*.

The door had been there, Truck was there—and the result had been as inevitable as Candace had foreseen. What Truck hadn't figured on was that his host would elect to slam the door on him so quickly.

Inside, it was dark—and it was cold. It was cold with a bone-chilling, impersonal quality that reminded the gladiator of the storage room in the Arizona meat-packing establishment where he'd held a summer job two seasons back. For one horrible moment he had the ghastly idea that he was undergoing some sort of deep-freeze process, following which he would be taken back to his chilly host's home planet, for thawing out and laboratory dissection.

A saving memory reminded

him that, minutes earlier, he had ribbed Candace unmercifully about her having read too many science-fiction magazines. Now, it appeared, the proverbial shoe was on the other foot with a vengeance—his own size thirteen. She might have read too many such stories, but he was living too many—one too many, to be exact.

But the vagrant whimsy restored what had become rather a shaky sanity—and a sane Truck MacLaurie, while not exactly a mental giant, was capable in an emergency of formidable thought and action. He realized that his surroundings, while unpleasantly cold, were not of a sufficiently low temperature to quick-freeze him. The process would last a long time. It might be unpleasant, but it offered further possibilities of escape.

He wondered what his surroundings looked like, and instantly remembered that he had stuffed a flashlight into his pants' pocket that very morning, in case he had to work the radio battery entirely under the jeep tarpaulin—to keep it from getting wet. In two seconds he had the flash out and turned on, and was surveying the strange cell in which he appeared to be imprisoned.

Earlier that year, one of his roommates, who was something of an electrical handyman, had taken apart an ailing television set in his

fraternity house. Truck's brief glimpse of the seemingly endless and incomprehensible confusion of wires, in their pink insulation wrappers, had conjured up a vision of a beehive being invaded by an army of pink worms.

Now he derived somewhat the same impression—save that the worms appeared to be of white metal, either silver or platinum, and the confusion even greater. He bent over a sector of the complex wiring that looked vaguely familiar, then jumped as a thump sounded from outside the hull. It was quickly followed by another thump.

Good old Doc! he thought, and hammered back until his hand began to ache. He considered using the flashlight, then decided against it. The thumping stopped, and he wondered how Jonah had felt in the whale's belly, without even a flashlight.

Better keep moving, he told himself, as he felt the gooseflesh form on his forearms. *Better keep looking around. Better keep trying to make this whale sick enough to throw me up . . .*

Outside, Hal and Candace Parsons were engaged in grim activity, as Hal prepared to see what effect the rifle would have. "It won't do much good," he said somberly, slipping a bullet into the chamber. "I was figuring on using it more against what came out, if necessary, than against that solid

beryllium egg, or whatever it is."

"Maybe you'd better not shoot," said Candace. "You might make it do something drastic. You might make it kill Truck, or take off with him."

"On the other hand," Hal said, trying to sight against one of the invisible hinges of the round trap-door in its flank, "I don't think I can hurt him much. But I just might annoy him into reopening that damned porthole."

He pulled the trigger, and they looked on, a bit desperately, as the steel-jacketed slug was shattered against the impervious hull. Somewhat to their relief, nothing happened. But there were no more thumps from inside the big globe.

"We've got to get help," said Hal quietly, returning the rifle to its canvas cover, before it could be damaged by the rain. "This situation has got out of hand. I don't care how many scientists break their skulls when they drop them through the cloud-layer. We can't stand by and leave Truck trapped in there."

"Of course we can't," said Candace. "I'm glad you feel so strongly about it. I was afraid he was getting on your nerves."

"Of course he was getting on my nerves," Hal Parsons said, somewhat testily. "But that doesn't mean I don't like the ham-handed . . ." He paused, finished casing the rifle, and added tersely. "Come on—let's get moving. Before we

do, let's make sure our pal's eyes—if they *are* eyes—can't see what we're doing."

"How do you blindfold a giant baseball?" Candace asked.

"With whatever I can find at hand," said her husband. "You throw a pretty good stone. Let's see how you are at throwing mud."

He showed her what he had in mind, and there was plenty of mud in a hollow of the hillside that had been turned into a small muck-hole by the alien-induced deluge. It took them about five minutes before the "front" of the alien was well plastered, as well as its "eyes." When the job was done, they moved quickly back toward the jeep and the radio.

"You'll have to crank, baby," he told Candace. "I've been doing the talking to these characters, and there's no sense—"

"Of course." Candace cut him off. "Honey, I'm frightened. Do you suppose that thing has already—?"

She paused, and they both stopped walking. A brash, familiar voice had hailed them from a hundred yards to the rear. Unable to believe their ears, they exchanged a half-fearful glance, and then turned slowly toward the source of the sound. It was Truck, waving and coming toward them at a trot.

"I don't know exactly what happened!" was his answer to the question that burst from them

both as he caught up with them. "All of a sudden—just a little while after your shot—he opened the door and I got out of there as fast as I could."

"What was it like?" Candace asked him. "It must have been horrible."

"I dunno," said Truck. "It was sort of interesting—but, brother, was it cold! *I damn near froze to death!*"

XI

THE REASON was obvious, of course. With an aperture of thirty centimeters and a focal length of about twenty-seven, the focus of the Conservationist's eye-lenses was highly critical; with the aperture about half a millimeter, as it had been left by the fragment of clay he had broken off, it became a minor matter.

He recognized the machines easily, near the edge of his new field of view, and began to work on the covering of a better-located eye. He did not succeed quite so well here, as the fragment he finally detached was larger, and the image correspondingly less clear, but it was still a good-enough job to enable him to follow the actions of the devices visually.

They were not traveling, as he has deduced already. Furthermore, a fourth machine, hitherto unnoticed, had joined them. All four had settled to the ground, so

that their main frames took the weight normally carried by the traveling struts, which appeared merely to be propping the roughly cylindrical shapes in a more or less vertical attitude. The different ways in which this was accomplished, in different cases, did not surprise the agent. It would not have occurred to him to expect any two machines to be precisely alike, except perhaps in such standard subcomponents as relays. And it was, of course, fortunate that every new development happened in sequence, enabling him to analyze carefully as he went along.

The upper struts were moving rather aimlessly in general, but it did not take long for him to judge that their primary function was manipulation. The objects being handled at the moment were for the most part meaningless—apparently stones, bits of metal without obvious function, utterly unrecognizable objects which might be aggregates of the unfamiliar carbon compounds, though the agent knew no way to prove it. There were one or two exceptions. The device that had projected the slug of metal at his hull was easy to recognize, even though he had not perceived all of it at the time it was being used.

He tried to decide what parts of the machines functioned as their eyes, and was able to find them. It was not difficult, for no

other portion was reasonably transparent. He discovered that all these vision organs were now turned toward him, but saw nothing surprising in the fact. The operators must have been familiar with the rest of the landscape, and did not expect anything of interest to show up on it.

Then the traveler noticed that all four of the machines were rising to their struts. As he watched, they began to move toward him.

At the same time, one of them extended a handling member toward a smaller fabrication, which almost immediately turned out to be another electromagnetic radiator. It was put to use at once, being swiftly raised to the upper part of the largest machine in the vicinity of the eyes, while a minor appendage of the handling limb which held it closed a switch.

This started the carrier frequency, after a delay which the agent was able to identify as due to the slow growth of the ion-clouds in portions of the apparatus—apparently they were produced by heating metal—and to the inherent lag of mechanical operations. The relays in the device were fantastically huge. They took whole milliseconds to operate and since they rather obviously had components consisting of multicrystalline pieces of metal, they must have had a sharply limited service life.

Evidently the natives had not

gone far enough with metal technology even to get the most out of one world's supplies. This was a side-issue, however. A far more interesting development involved the modulation of the carrier. The agent found it possible actually to see the way this was being carried out.

An opening in the machine, not far below the eyes, rimmed with a remarkably flexible substance at whose nature he could only guess, began to open, shut and go through a series of changes of shape. He found it possible to correlate many of these contortions with the modulation of the electromagnetic signal. Apparently the opening was part of a device for generating pressure-wave patterns in the atmosphere.

The agent supposed that whatever plan the distant observers had been maturing must be moving into action, and he wondered what the machines were about to do. He was naturally a little surprised, since he had not expected any developments of this sort so soon.

Then he wondered still more, for the advance toward him which had been commenced halted, as suddenly as it had begun. Whatever had motivated them had either ceased—or the whole affair was part of an operation whose general nature was still obscure. It would be the better part of valor to assume the latter, he decided.

He watched all four of the machines with minute care. They were now balanced on their support struts. They were neither advancing nor retreating, and the upper members were moving in their usual random fashion. All eyes were still fixed on his ship.

Then he noticed that the pressure-wave assemblies of all four were functioning, although three did not possess any broadcaster whose signal could be modulated. He watched them in fascination. Sometimes—usually, in fact—only one would be generating waves. At others, two, three or all four would be doing so. Even the one with the broadcaster did not always have its main switch closed at such times. Something a little peculiar was definitely occurring.

It had already occurred to the agent that the atmospheric waves carried the control impulses for these machines. Why should the machines themselves be *emitting* them, however? Receivers should be enough for such machines. Then he recalled another of his passing thoughts, which might serve as an explanation. Perhaps there was only *one* operator for all of them. And after all, why not? It might be better to think of the whole group as a single machine.

In that case, the pressure waves, traveling among its components, might be coordination signals. They just might be. At any rate,

some testing could be done along this line. Whatever limitations he and his ship might have on this world, he could at least set up pressure waves in its atmosphere. Perhaps he could take over actual control of one or more of these assemblies. He had had the idea earlier, in connection with radio-waves, and nothing much had come of it. But there seemed no reason not to try it again with sound. Nothing could surpass the experimental method when it was pursued with one strongly likely probability in mind.

A logical pattern to use would be the one that had been broadcast back to the distant observer a few moments before. It had been connected with a fairly simple, definite series of actions, and he had both heard and seen its production. He tried it, causing his hull to move in the complex pattern his memory had recorded a few seconds before. He tried it a second time.

"The thing's howling like a fire-siren!"

Just as when he had tried the same test with radio waves, there was no doubt that an effect had been produced, though it was not quite the effect the agent had hoped for. The handling appendages on all four of the things dropped whatever they were holding and snapped toward the upper part of their bodies. Once there, their flattened tips pressed firmly

against the sides of the turrets on which their eyes were mounted.

For a moment, none of them produced any waves of its own. Then, the one with the broadcaster began to use it at great length. The agent wondered whether or not to attempt reproduction of the entire pattern it used this time, and decided against it. It was far more likely to be a report than involved in control. He decided to wait and see whether any other action ensued.

What did result might have been foreseen even by one as unfamiliar with mankind as the Conservationist. The machine with the broadcaster began producing more pressure waves, watching the ship as it did so. The agent realized, almost at once, that the controller was also experimenting. He regretted that he could not receive the waves directly, and wondered how he could make the other—or others—understand that their signals should be transmitted electromagnetically.

As a matter of fact, the agent could have detected the sound waves perfectly well, had it occurred to him to extend one of his seismic receptor-rods into the air. A sound wave carries little energy, and only a minute percentage of that little will pass into a solid from a gas. But an instrument capable of detecting the seismic disturbance set up by a walking man a dozen miles away is not going

to be bothered by quantitative problems of that magnitude. However, this fact never dawned on the agent. Yet few would deny that he had done very well.

As it happened, no explanation was necessary for the hidden observer. He must have remembered, fairly quickly, that all the signals the agent had imitated had been radioed, and drawn the obvious conclusion. At any rate, the broadcaster was very shortly pressed into service again. A signal would be transmitted by radio, and the agent would promptly repeat it in sound waves.

Since the Conservationist had not the faintest idea of the significance of any of the signals this was not too helpful—but the native had a way around that. A machine advanced to the hull of the ship and scraped the clay from one of its eyes. The particular eye was the most conveniently located one, to the agent's annoyance. But fortunately it was not the only one through which he could see the things.

Then, an ordered attempt was begun, to provide him with data which would permit him to attach meanings to the various signal groups. Once he had grasped the significance of pointing, matters went merrily on for some time.

They pointed at rocks, mountains, the sun, each other—each had a different signal group, confirming the agent's earlier assump-

tion that they were not identical devices. But there also seemed to be a general term which took them all in.

He was not quite sure whether this term stood for machines in general, or could be taken as implying that the devices present were part of a single assembly, as he had suspected earlier. While the lessons went on, two of them wandered about the valley seeking new objects to show him. One of these objects proved the spark for a very productive line of thought.

Its shape, when it was brought back and shown to him, was as indescribable as that of many other things he had been shown by them. Its color was bright green and the agent, perceiving a rather wider frequency band than was usable by human eyes, did not see it or think of it as a green object. He narrowed its classification down to a much finer degree.

He did not know the chemical nature of chlorophyll, but he had long since come to associate that particular reflection spectrum with photosynthesis. The thing did not seem to possess much rigidity. Its bulbous extensions sagged away from either side of the point where it was being supported. The handling extension that gripped it seemed to sink slightly into its substance.

He had never seen such a phenomenon elsewhere, and had no

thought or symbol from the term *pulpy*. However, the concept itself rang a bell in his mind, for the machines facing him seemed fabricated from material of a rather similar texture. It was a peculiarity of their aspect that had been bothering him subconsciously ever since he had seen them moving. Now a nagging puzzlement—subconscious frustration was always unpleasant—was lifted from his mind.

The connection was not truly a logical one. Few new ideas have strictly logical connection with pre-existing knowledge. Imagination follows its own paths. Nevertheless, there *was* a connection, and, from the instant the thought occurred to him, the agent never doubted seriously that he was essentially correct. The natives of this planet did not merely use active carbon compounds as fuel for their machines. They constructed the machines themselves of the same sort of material!

Under the circumstances it was a reasonable thing to do—if one could succeed at it. The reactions of such chemicals were undoubtedly rapid enough to permit as speedy action as anyone could desire—at least as fast as careful thought could control. The agent's race had long since learned the dangers inherent in machines capable of responding to casual, fleeting thoughts and his ship's pickup-circuits were less sensitive,

by far, than they might have been.

It was obvious why these devices were controlled from a distance, instead of being ridden by their operators, too. There must be some dangerous reactions, indeed, going on inside them. The agent decided it was just as well that his temporary prisoner had merely looked at the inside of his ship, without touching anything, and resolved to take no more such chances.

At any rate, there should be no more need for that sort of experiment. Language lessons were well under way. He had recorded a good collection of nouns, some verbs the machines had acted out, even an adjective or two. He was puzzled by the tremendous length of some of the signal groups, and suspected them of being descriptions, rather than individual basic words.

But even that theory had difficulties. The signal which, apparently, stood for the machines themselves, one which should logically have called for a rather long and detailed description, was actually one of the shortest—though even this took several hundred milliseconds to complete. The agent decided that there was no point in trying to deduce grammar rules. He could communicate with memorized symbols, and they would have to suffice.

Of course, the symbols that could be demonstrated on the spot

were hardly adequate to explain the nature of Earth's danger. The Conservationist had long since decided just what he wished to say in that matter, and was waiting, impatiently, for enough words to let him say it.

It gradually became evident, however, that if he depended on chance alone to bring them into the lessons he was going to wait a long time. This meant little to him, personally. But the mole robots were not waiting for any instruction to be completed. They were burrowing on. The agent tried to think of some means for leading the lessons in the desired direction.

This took a good deal of imagination on his part, obvious as his final solution would seem to a human being. The idea of having to learn a language had been utterly strange to him, and he was still amazed at the ingenuity the natives showed, in devising a means for teaching one. It was some time before it occurred to him that *he* might very well perform some actions, just as *they* were doing. If he did *not* follow his own acts with signal groups of his own, these natives might not understand that he wanted theirs. The time had come for a more direct and audacious approach to the entire problem, and at the thought of what he was about to do his spirits soared.

He did it. He lifted the ship

a few feet into the air, settled back to show that he was not actually leaving, and then rose again. He waited, expectantly.

"Fly."

"Up."

"Rise."

"Go."

Each of the watching machines emitted a different signal, virtually simultaneously. Three of them came through very faintly, since the speakers were some distance from the radio. But he was able to correlate each with the lip-motions of its maker. He was not too much troubled by the fact that different signals were used. He was more interested in the evidence that a different individual was controlling each machine. This was a little confusing, in view of his earlier theories. But he stuck grimly to the problem at hand.

XII

HAL AND CANDACE Parsons, and Truck MacLaurie were sitting on a relatively mudless patch of earth, within comfortable watching distance of the alien. They had passed the saturation point in their general, rain-soaked misery, and the experience Truck had just been through had unnerved them all to the point where they desperately needed a rest.

Hal was putting Truck through something of a third degree. He

was attempting to draw some specific information out of the athlete's unscholarly mind as to the precise nature of the alien's interior. It was proving to be rugged going, and his nerves were not in the best possible shape.

"Dammit!" he exploded, when Truck proved, for the twentieth time that he had no idea why he had been so suddenly allowed to leave. "The opportunity of the ages, and it has to be given a blockhead with an I.Q. of seventy-seven, who can't tell what it's all about!"

"Lay off him, honey," said Candace pointedly. "Truck's no blockhead. He's a blocking back, amongst other things. He just doesn't happen to be a scientist."

"Okay, if you say so." Hal ran unsteady fingers through his soaking-wet hair. "Sorry, Truck. It's just so infernally frustrating."

"Somebody's coming," said Truck with charitable forbearance, apparently unruffled by the catechism he had just been through. "Over there—look."

A muddy, heavily-encumbered figure was approaching them through the rain and mist. Catching sight of them, it waved.

Truck, rising, advanced along the hillside to meet it, while Hal and Candace rose slowly to their feet. On closer approach, it proved to be a soldier, mud-soaked and carrying a movie-camera slung over one shoulder,

and what looked like a scintillometer over the other. Truck had quickly relieved the newcomer of a heavy walkie-talkie.

"Mr. and Mrs. Parsons?" the soldier said as he came up to them. "I'm General Wallace Eades. I've been talking to you upstairs long enough. I finally decided to make the drop myself."

"You don't know how glad we are to see you, General," said Candace, noting the two mud-dulled silver stars on the collar of his open shirt. "After three days with our friend over there"—she nodded toward the impassive, grey-metal globe—"we were beginning to wonder if we were humans ourselves."

General Eades, his blue eyes unusually bright and young and alert in his lined, leathery face looked at the monstrous bulk of the alien and stood for a moment in silent speculation. Then he said, "I was beginning to think it was all a pipe-dream. He's a big fellow, isn't he?"

For the next few minutes, he talked with Hal, letting the geologist brief him on recent events. Then, turning to Truck, "Quite an experience for you, young man. If we get out of this thing in any sort of shape, you'll be in Hollywood in ten days."

"Coach wouldn't like it," said the football player. "And I'm no Elvis Presley."

General Eades put his head

back and laughed. Then he unslung the movie camera and said, "I gather you haven't made a pictorial record of your friend over there. I don't know about you, but I don't want to be laughed out of the service. I thought you said he only had two eyes. Isn't that a third? Did you put mud in that one, too?"

"I'll be damned!" said Hal. He and Candace regarded one another. They were bewildered, amazed and a little frightened. His lips tightening, Hal said, "He's full of surprises. Stick around and you'll find out."

"I intend to," said General Eades. "I've been on this thing, ever since the first radar flash came in—four days ago. Haven't had two hours consecutive sleep since. You've got no idea the fuss our friend has kicked up. The army's got ten thousand men trying to crack this valley, and diplomats and newspaper men are sleeping on billiard tables in Butte—if they're lucky enough to buy space on one."

As he spoke, he walked slowly around the monstrous globe, holding the camera to eye level, shooting it from all sides. Returning, he reappropriated the walkie-talkie from Truck, who had been dutifully standing guard over it.

"I checked the stuff in your jeep and trailer on the way here from my drop," General Eades said. "You must have got more

than just arm-tired cranking that battery outfit of yours. I haven't seen one like it since World War Two."

"It was the best the department at the University could allow us," said Hal, a trifle on the defensive.

Tactfully, Candace put in, "We're awfully glad you got here, General. We were not only wet—we were lonely for a new face."

"Afraid mine's not exactly new," said Eades. Then, putting the walkie-talkie to work, he said resignedly. "Guess I'd better report, before they send a big drop in, and a few-score G.I.'s get killed. This valley's full of rocks and potholes, and visibility is nil."

"You're telling us, General!" said Truck.

The general's report, via radio, was lengthy but concise. He had yet to complete it when an audition from the alien, mimicking his own voice, caused interference that made intelligible communication impossible. He lowered the set, looked at the others, and nodded toward the grey-metal globe.

"Is that it?" he asked.

"That's it," said Hal.

Almost before the words were out of his mouth, a new sound—not through the radio, but carried clearly through the open air—smote all their ears. Smote was the word, as it rose in an ear-shattering crescendo that caused them

to look at one another in alarm.

"The thing's howling like a fire-siren!" cried Candace, clapping her hands to her ears. The others followed suit.

It continued, for a couple of deafening minutes that all but reduced already quivering nerves to shreds. Then, as suddenly as it had started up, it ceased, and slowly they removed their hands.

Candace wondered if her eardrums were permanently damaged. She saw Truck hammering the side of his head, like an inexperienced swimmer with water in his ear.

He said, "If that's his natural voice, I wonder how he sounds when he's *really* worked up."

Hal and the general exchanged a significant look. It was Eades who broke the welcome silence. "Maybe he's right," he said. "Is that the first time it's tried communicating—apart from radio mimicry?"

"That's right," Hal told him.

"Significant," said General Eades. "Damned significant. I wonder . . . That third eye bothers me. Do you suppose it bothers him?"

He walked up to the machine, disregarding Candace's gasp, "Be careful!"

Gently he scraped the mud from the lens. Nothing happened, but the sound did not return. He said, scowling at the porthole,

"The surface looks too flat for close vision."

"We had the same thought," Hal told him. "Still, it can see when it wants to."

General Eades walked around the sphere, studied the other two eyes, noted the places where the caked mud had flaked away. "Used to know an optometrist," he muttered. "Could be, the mud helps to give him closer focus by covering most of the lens."

". . . most of the lens," said the general, though his lips did not move. Eades started, looked at the others, and instantly pointed to one of his own eyes. He said, "Eye."

"Eye," said the voice from the alien. There was no question now in any of their minds. The alien had clearly discovered some means of direct vocal speech.

After several more tests, the general walked back to the others, his blue eyes alight with excitement. "That's it," he told them. "Our friend made that howl to let us know it had a *new* means of communication."

Hal motioned him to silence, and they waited, breathlessly. But the alien did not repeat the speech or any part of it. The geologist advanced, pointed to himself, and said, "Man."

"Man," said the alien.

"It understands," said Hal, his voice almost cracking. "Listen!" He accompanied the words by no

pantomime, and the alien was silent.

"I'll be damned!" said the general.

"Eureka!" cried Candace, raising her arms toward the sky.

"Eureka!" said the voice from the globe.

"Careful, baby," Hal told her. "You just gave our friend a bum steer. Don't gesture unless you're outlining exactly what you mean."

From then on, in the excitement of attaining at least a rudimentary understanding with the thing from space, the little group on the hillside forgot the rain and their physical misery. Time was forgotten too, as they taught it new word meanings, and brought it examples of equipment and local flora in an effort to increase its vocabulary.

Candace found a bedraggled plant, wiped mud from it and said, "Green," pressing the stem as she held it up for the alien to see.

"Green," came the answer. "Plant—green."

"Green," Candace repeated. "Green through sun." She pointed skyward. "Green through photosynthesis."

"Plant green—through photosynthesis," came the expected reply. Then, "Plant, man green—both photosynthesis."

"Bless me!" cried General Eades. "*We're on the way!*"

Hal spoke up then. "Has it occurred to you, General, that our

friend here may have some message to give us? If he has, it may take us a hell of a long time before we can give him the right words to give back to us."

Eades stroked his chin. "You were probably right in asking for philologists earlier," he said unhappily. "We're a bunch of babes in the woods at this game."

There was a long, disconsolate silence. Then Candace broke it, saying bravely, "In any case, we've got to keep going. Our friend may have an answer of his own."

"I'd give a lot for one good word-man I could count on getting down here alive," said the general. "I'll put in a call."

But, before he could get the radio in operation, the observant Truck said, "Look! Hey, don't tell me he's leaving us now!"

They stared in horror and utter dismay as the great, grey bulk of the alien rose vertically in the roil of mud already familiar to all but the general. Then they breathed sighs of relief. It hovered, only a few feet above the ground, then settled back, then rose again and remained stationary.

"He's trying to signal to us!" cried Candace, her voice shrill with excitement. "He wants us to give him a word for what he's doing."

"Fly!" shouted the general.

"Up!" said Candace.

"Rise!" called Hal Parsons.

"Go!" yelled Truck MacLaurie.

They spoke almost simultaneously, but the monster from space seemed confused. He made no answer at all.

XIII

THE AGENT dropped back to the ground and went through his actions again. This time only the individual with the radio spoke. The word it used was *Rise*. This was not the one it had used the other time. To make sure, the agent went through the act still again, and got the same word. Evidently, once their minds were made up, they intended to stick to their decisions. What *could* he think?

Then he tried burrowing into the ground, which seemed a useful action to be able to mention. The word given on the radio was *dig*, though two of the other machines apparently had different ideas once more.

It did not occur to him that these things might be detecting the by-products of his digging as well as his deliberate attempts to produce sound waves, or that his efforts to focus his third eye lens, a little while before, had actually been the cause of their sudden interest in his ship at that moment. He was much too pleased with himself at this point to entertain such extraneous ideas.

Having taken over the initiative in the matter of language lessons, he concentrated on the words he wanted, and, within a fairly short time, felt sure that he could get the basic facts of Earth's danger across to his listeners. After all, only four signal groups were involved in the concept. Satisfied that he had these correctly, he proceeded to use them together. In his progress now he felt the surge of a very personal kind of pride.

"Man dig—mountain rise."

For some unexplained reason the listening machines did not burst into frantic activity at the news. For a moment, he hoped that the controllers had turned to more suitable equipment to cope with the danger, leaving inactive that which they had been using. But he was quickly disabused of that bit of wishful thinking. The machine with the radio began to speak again.

"Man dig." It bent over and began to push the loose dirt aside with the flattened ends of its upper struts.

The agent realized, with some dismay, that its operator must suppose he was merely continuing the language lesson. He spoke again, more loudly, the two signal groups which the other seemed to be ignoring.

"Mountain rise."

All the machines looked at the hill across the valley, but noth-

ing constructive seemed likely to come from that. If they waited for that one to rise noticeably, it would be too late to do anything about enlightening them as to the robots. He tried, frantically, to think of other words he had learned, or combinations which would serve his purpose. One seemed promising to him.

"Mountain break—Earth break—man break." The verb did not quite fit what was to happen, according to its earlier demonstration, but it did carry an implication of destruction, at least. His audience turned back to the ship, but gave no obvious sign of understanding.

He thought of another concept which might apply, but no word for it had yet appeared in the lessons. So, to illustrate it, he turned his ship's weapon on a patch of soil, a hundred yards from the bow. Twenty seconds' exposure to that needle of intolerable flame reduced the ground which it struck to smoking lava.

Even before he had finished, the word *fire* came from one of the watchers. The observer made no comment on the fact that the tube which threw slugs of metal had been leveled at his hull, during most of the performance. He simply made use of the new word.

"Man dig—Earth fire—mountain fire."

One of the machines produced its ionization tube and cautiously

approached the patch of cooling slag. This had a slight amount of radioactivity from the beam, and its effect on the tube gave rise to much mutual signaling on the part of the machines. This culminated in a lengthy radio broadcast, not addressed to the agent. Then the language lessons were resumed, with the natives once more taking the initiative.

"Iron—copper—lead." Samples were shown individually.

"Metal." All the samples were shown together.

"Melt." This was demonstrated, when they finally made him understand that the weapon should be used again.

"Big—little." Pairs of stones, of cacti, coins and figures, scratched in the dirt, illustrated this contrast.

Numbers—no difficulty.

"Ship." This proved confusing, since the agent had supposed the word *man* covered any sort of machine.

Finally, slightly fuller sentences became possible.

"Fire-metal under ground," the men tried.

The agent repeated the statement, leaving them in doubt. More time passed, while *yes* and *no* were explained. Then the same phrase brought a response of "Yes."

"Men dig."

"Yes—men dig—mountain melt—mountain rise."

"Where?" This word took still

more time, and was solved, at least, only by a pantomime involving all the men. *Here* and *there* were covered in the same act. However, knowing what the question meant did not make it much easier for the agent to answer it.

He had no maps of the planet, and would have recognized no man-made charts, with the possible exception of a globe, which is not standard equipment on a small field expedition.

After still more time, the men managed to get a unit of distance across to him, however, and he could use the ion beam for pointing. In this way, he did his best to indicate the locations of the moles.

"There! Eighty-one miles. Two miles down." And, in another direction. "There! Fifteen hundred-twelve miles. Eighteen miles down." He kept this up through the entire list of the forty-five moles he had detected and located.

The furious note-taking that accompanied his exposition did not mean anything to him, of course, though he deduced correctly the purpose of the magnetic compass one of the listening machines was using. He realized that giving positions to an accuracy of one mile was woefully inadequate for the problem of actually locating the moles.

But he could do the final close-guiding later, when the native ma-

chines approached their targets. He could come to their aid if they did not have detection equipment of their own which would work at that range. Just what possibilities in that direction might be inherent in organic engineering the agent could not guess. At any rate, the natives did not seem to feel greater precision was needed. They made no request for it.

In fact, they did not seem to want *anything* more. He had expected to spend a long time explaining the apparatus needed to intercept and derange the moles. But that aspect of the matter did not appear to bother the natives at all. Why, why? It *should* have bothered them.

In spite of appearances, the agent was not stupid. The problem of communicating with an intelligence not of his own race had never, as far as he knew, been faced by any of his people. He had tried to treat it as a scientific problem. It was hardly his fault that each phenomenon he encountered had infinitely more possible explanations than ordinary scientific observation, and he could hardly be expected to guess the reason why.

Even so, he realized it could not be considered a proven fact that the natives had read the proper meaning from his signaling. He actually doubted that they had, in about the way and to about the extent that some mid-nineteenth

century human physicists doubted the laws of gravity and conservation of energy. He determined to continue checking as long as possible, to make sure that they *were* right.

The human beings, partly as a result of greater experience, partly for certain purely human reasons, also felt that a check was desirable. With their far better local background, they were the first to take action. To them, *fire metal*, when mentioned in conjunction with a positive test for radioactivity, implied only one kind of fire.

Man dig was not quite so certain. They apparently could not decide whether the alien being was giving information or advice—whether someone was already digging at the indicated points, or that they should go there themselves to dig. The majority inclined to the latter view.

To settle the question, one of them took the trench-shovel, which was part of their equipment, and arranged a skit that eventually made clear the difference between the continuative—*digging*—and the imperative *dig!*

While this was going on, another thought occurred to the agent. Since these things had used different words for the machines he was watching and the one he was riding, perhaps *man* was not quite the right term for the mole-robots he was trying to tell about. He wondered how he could gen-

eralize. By the end of the second run-through of the skit he had what he hoped was a solution.

"Man digging—ship digging," he said.

"Digging fire metal?"

"Man digging fire metal—ship digging fire metal."

"Where?"

He ran through the list of locations again, though somewhat at a loss for the reason it was needed, and was allowed to finish, because, though he did not know it, no one could think of a way to tell him to stop. He felt satisfied when he had finished—there could hardly be any doubt in the minds of his listeners now.

They were talking to each other again—the reason was now obvious enough. The operators must be in different locations, must be communicating with each other through their machines. He had little doubt of what they were saying, in a general way.

Which was too bad—in a general way.

"It's vague—infernally vague."

"I know—but what else can he mean?"

"Perhaps he's just telling about some of our own mines, asking what we get out of them or trying to tell us he wants some of it."

"But what can 'flame metal' mean but fissionables? And what mine of ours did he point out?"

"I don't know about all of his locations, but the first one he men-

tioned—the closest one—certainly fits."

"What?"

"Eighty-one miles, bearing thirty degrees magnetic. That's as close as you could ask to Anaconda, unless this map is haywire. There are certainly men digging there!"

"Not two miles down!"

"They will be, unless we find a substitute for copper."

"I still think this thing is telling us about beings of its own kind, who are lifting our fissionables. They could do it easily enough, if they dig the way this one does. I'm for at least calling up there, and finding out whether anyone has thought of drilling test cores under the mine level—and how deep they went. There's no point walking around here, looking for anything else. We've found our fireball, right here."

The agent was interested but not anxious when the machines turned back to him, and direct communication was brought once more into operation. He was beginning to feel less tense, and confident that everything was going to come out all right if he stuck with it.

"Eighty-one miles that way. Men digging. Go now."

They illustrated the last words, turning away from his ship and starting in the proper direction. The agent could not exactly relax, fitting as he did into the spac-

es designed for him in his ship, but he felt the appropriate emotion.

They were getting started on one of the necessary steps, at least. Presumably, the other and more distant ones would be tackled as soon as the news could be spread. These machines moved slowly, but their control impulses apparently did not.

It occurred to him that, since none of the devices had been left on hand to communicate with him, the natives might be expecting him to appear at the nearest digging site—the one they had mentioned. The more he thought of it, the more likely such an interpretation of their last message seemed. So, with the men barely started on their walk back to the waiting jeep, the Conservationist sent his ship whistling upward on a long slant toward the northeast.

XIV

THAT THE multiple answer had puzzled the star-traveler became evident when he dropped back to the ground and went through the entire process a second time. This time, General Eades took over, employing Hal Parsons' definition—"Rise."

Apparently, the switch in words from one member of the party to another troubled the alien, for he dropped gently. Then he rose and hung in the air once more, a few

feet above the muddy soil. The general repeated, "Rise,"—and after a few seconds of motionless hovering the alien dropped back to the ground and did not go through the performance a fourth time.

"I wish our experimental boys would come up with an anti-grav like that," said the general, in a wistful aside. "It would sure give us the jump on you-know-who. Wonder where he gets all that power from."

"You and me both," murmured Truck MacLaurie. "What a bucking-machine he'd make for practice."

Candace giggled, and Hal looked at her, then despairingly at Truck. To give him solace, Candace said, "Just think, honey, the progress we've made in the last few hours. Only a little while back, we were nowhere."

"I wish I felt it were getting us anywhere," said the unhappy geologist. "When we started out looking for minerals, I never figured we'd come up against anything like this."

The general motioned them to silence, saying, "He's up to something new. Lordy! Just look at him dig!"

Candace said, "He's burrowing! That's all. What did you expect?"

Truck cried, "He's mining!"

"Will you shut up!" said Hal rudely, as General Eades scowled unhappily at the confusion-poten-

tial of another multiple answer. Another howling siren rose from the alien. But it was neither as enduring nor as ear-shattering as his earlier signal.

"Sorry, honey," Candace whispered when it was over.

It became quickly evident that the leadership in the language lesson had been reversed. Evidently having decided he had learned all he could from human demonstration, the visitor was demonstrating on his own, hoping the humans could supply the definitions he sought.

"I'd give my stars to know what he's trying to get through," said the general softly. "It must be important, if he's come all the way from God knows what star to give it to us."

There was another growl from the alien, which all four of them took as a request for silence. From then on, the reverse lesson went on apace. The only difficulty was that the words evidently sought by the visitor, made little sense to his watchers.

"Man dig—mountain rise," came the message.

They stared at one another, uncomprehending. Finally, with a shrug, the general bent over awkwardly, hampered as he was by the walkie-talkie, and began scraping a hole in the mud with his fingers.

"Man dig," Eades said, as he did so.

"Mountain rise."

There was insistence in the aliens words, which caused all four of his listeners to turn toward the ragged range-crests, which was barely visible now through the rain and mist on the far side of the valley. There was further confusion, when the great, grey globe gave voice to the strange words, "Mountain break—Earth break—man break."

Then, came sudden, unexpected, frightening demonstration in action. For the second time since its discovery an opening appeared in the dully gleaming, curved surface of the alien—an opening both smaller and more menacing than the one which had all but led Truck to his doom.

A snout appeared, swiveled past the watching group, and from it there emerged a darting, blinding ray of light—or heat. It struck the muddy hillside a hundred yards or so away and with frightful, eruptive violence a patch of the soggy soil itself began to bubble and turn, first red, then white-hot. A trickle of fluid, molten material ran slowly down the hillside, and a cloud of white steam rose high in the air. Once more, the sense of intolerable heat was present.

"My God!" exclaimed a white-lipped Hal Parsons. "He's set fire to the earth itself!" He picked up the rifle, which he was still carrying, unslung its cover and aimed it at the hull-opening, pushing

Candace behind him as he did so.

"Put that toy away, Parsons," said the general with grim insistence. "It won't do a damned bit of good. Do you understand? Put it away."

The intolerable ray of heat vanished, and the opening in the alien's hull disappeared as abruptly as it had opened. The visitor said, slowly, "Man dig—Earth fire—mountain fire."

"Let's have the scintillometer," the general said to Truck. "It's a lot better than that Geiger job you've been using."

"I can work it," said Hal. Taking the instrument, and adjusting it, he walked over to the rapidly cooling, but still semi-molten spot which the heat-ray had turned to lava. The count ran high and fast as he approached it. Turning back to the general, he said, "No doubt about it—she's plenty hot."

"Got to report this," said Eades tersely. "He's trying to get something through, all right—and *I don't like the looks of it*. Maybe some of those eggheads sitting around in Butte can give us a clue."

It was a lengthy broadcast, relayed through the radio of a helicopter hovering above the clouds. When it was over, the general signed off in disgust.

"How do you like that?" he said, to no one in particular. "Those broad-beamed boffins want us to carry on." He cursed,

fluently, effectively, and then added, "Sorry, ma'am," to Candace without turning a grey hair.

She said, "Maybe we'd better try him on minerals alone."

So, the lesson continued, until some of the confusion about various stones and metals, upon the nature of machines, was partially cleared up. Then came the alarming statement, "Yes—men dig—mountain melt—mountain rise."

"Is he trying to tell us *men* are planting volcanoes under us?" Candace asked incredulously.

"He's trying to tell us someone or something is," her husband told her grimly. "Ask him where, General?"

This led to laborious exchanges, establishing direction and distance units, after which the alien began issuing his information, as to the location of the horrors to come if his warnings were ignored. While this was going on, Parsons took notes, doing his best to write legibly on limp paper. Finally Candace, who had once learned shorthand, took over the job.

General Eades turned toward her and said, "That seems to be all. Got them?"

"All forty-five, General," said Candace. "Want me to read them back to you?"

"Not yet," said Eades. "I want to know what he means by *men* digging volcanoes."

The results were not satisfactory, and so the alien went through

the entire list again. Then, in desperation, the general got into touch with the higher-ups once more. He talked long and determinedly and with authority. He concluded with, ". . . There's absolutely no point in walking around here, looking for anything else. We've found our fireball, right here."

He paused, looked at the impassive facade of the alien inquiringly. "More?" he asked. "Anything more?"

The voice, so oddly human, so utterly like his own in tone and inflection, replied, "Eighty-one miles that way. Men digging. Go now."

"Okay," said the general. "That's the message." And, to the alien, "Eighty-one miles that way. Men digging. Go now." He motioned to the others to follow, and led the way through the rain toward the jeep.

"You're not going to leave him?" Candace asked, incredulously.

"It may take all of us to get out of this damned valley," Eades told her. "If what he reported is true—no matter how garbled—our work is at Anaconda. That's where the nearest trouble is, according to him. We'll have weasels in here by tomorrow, to do a proper survey job. Complete with scientists . . ." Then, with a look of apology, "Sorry, folks, I mean specialists. You've done great."

"That's okay, General," said Truck, in his easy-going drawl.

The others laughed.

Candace said, "This probably sounds screwy, but I'm going to miss our globular friend. He was—"

"Not *he—it*," said Parsons. "Why must you give it *sex*?"

"Forget about sex," the general told them, masking a smile. "We're going to have one sweet job getting out of here."

Candace looked back, through the mist and rain and darkness of approaching twilight, and suddenly uttered a cry of alarm. "Look!" she said, grabbing the nearest arm, which happened to belong to the general. "He's taking off!"

They watched, all with mixed emotions, as the alien rose vertically from its hillside bed, and hovered a moment at mountain-top level. Then it suddenly veered, moved swiftly toward the north and disappeared.

"Well," said Truck. "Goodby."

And that seemed to sum it up. Before they had the jeep halfway up the pass the rain had stopped, and there was a break of afterglow gold in the western sky.

XV

THE MOMENT HE rose above the valley, the Conservationist picked up the radar beams again—the beams that had startled him when he first approached the

strange planet. As had happened on the earlier occasion, a few milliseconds served to bring many more of them to bear upon him.

He was quite evidently being watched on this journey. But he no longer expected these beams to carry intelligent speech. More or less casually, he noted their points of origin. He wondered, for brief moments, whether it might not be worth while to investigate them later, but felt fairly certain that it wouldn't. He turned his full attention on his goal.

The crusts of clay had fallen from his eyes as he flew, and he was once again limited to long-distance vision. He could make out the vast, terraced pits of the great copper mine as he approached, but could not distinguish the precise nature of the moving objects within. He did not consider sight a particularly useful or convenient sense anyway, so he settled to the ground, half a mile from the pit's edge, bored in as he had before, and began probing with seismic detectors and electrical senses.

He had, of course, already known of the presence of the hole. A fair amount of seismic activity had reached his original landing-spot from this place, enabling him to deduce its shape fairly accurately. Now, however, he realized—and for the first time—the amount of actual work going on. There were many machines of the

sort he had already seen, which was hardly surprising. But there were many others as well, and the fact that most of them were metallic in construction startled him considerably.

There was a good deal of electrical activity, and at first he had hopes of finding an actual native. But these hopes quickly faded when he discovered there was nothing at all suggestive of thought-patterns. Some of the machines were magnetically driven. Others used regular electrical impulses for, apparently, starting the chemical reactions which furnished their main supply of energy.

The really surprising fact was the depth of the pit. If this work had begun since the receipt of his information, the wretched, guilty robots would be caught without difficulty. It took some time, by his perception standards, for a truer picture of the situation to be forced on his mind.

The pit had *not* been started recently. The progress of the diggers was fantastically slow. Clumsy metal scoops raised a few tons of material at a time and deposited it in mobile containers that bore it swiftly away. Fragments of the pit-wall were periodically knocked loose by expanding clouds of ionized gas, apparently formed chemically. The shocks initiated by these clouds were apparently the origin of most of the

temblors he had felt from this source, while he was still eighty miles away.

His electrical analysis finally gave him the startling, incredible facts. This was a copper mine—extracting ore far poorer in quality than any his own people could afford to process. This race was certainly confined, for some reason, to its home planet, and had been driven to picking leaner and ever leaner ores to maintain its civilization.

The development of organic machines had given them a reprieve from barbarism and final extinction, but surely could not save them forever. *Why in the galaxy*, did they not use the organic robots for digging directly, as he had seen them do, during the language lessons? One would think that metal would be far too precious to such planet-bound people, for them to waste even iron on bulky, clumsy devices such as those at work here!

Even granting that the machines he had originally seen, and which seemed the most numerous, were not ideally designed for excavation work, surely, surely, better ones could be made. A race that could do what this race had done with carbon compounds could have no lack of ingenuity—or, more properly, of creative genius.

Very slowly, he realized why they had not—and why his mis-

sion was futile. He realized why these people would be doomed, even if the moles had never been planted. He noticed something relevant, during the conversation, but had missed its full staggering implication. The organic compounds were *soft*. They bent and sagged and yielded to every sort of external mechanical influence—it was a wonder, thinking about it, that the machines he had seen held their shapes so well. No doubt, there was a framework of some sort, perhaps partly metallic even though he had not perceived it.

But such things could never force their way through rock. The only way they *could* dig was with the aid of metallic auxiliaries—simple ones, such as those used to illustrate the verb to him, or more capacious and complex ones like those in use here.

This race was doomed, had been doomed long before the poachers ever approached their planet. They needed metal, as any civilization did. They were bound to their world, but kept from moving about even upon it, for not one in a thousand of these people could conceivably travel by machine, as the agent's race did. The organic engines could not possibly be used as vehicles. They could not be so used because their very essential nature of chemical violence made them *untouchable*.

These people were trapped in

a vicious circle, using their metal to dig more metal, sparing what little they could for electrical machinery and other equipment essential to a civilization, always having less and less to spare, always using more and more to get it. The idea that they could survive, until the planet's natural processes renewed the supply, was ridiculous.

It was, in short, precisely the same tragic circle that the agent's own race was precariously avoiding, millennium after millennium, by its complex schedule of freighters that distributed the metal from each planet in turn among thousands of others, then either waited for nature to renew the supply, or "tickled up" uninhabitable worlds as the poachers had done to this one.

Metal kept the machines operating. The machines kept food flowing to that vast majority of individuals who could not travel in search of it. A single break in the transport schedule could starve a dozen worlds. It was a fragile system, at best, and no member of the race liked to think about—much less actually face—examples of its failure.

The agent's mounting discomfort as he considered the matter of Earth was natural and inevitable. This race was what his own might have been, hundreds of millions of years before, had means of space-travel not been devel-

oped. They would probably be extinct before the poachers' torpedoes began to take effect, which was, no doubt, a mercy.

The agent could not help them. Even if the communication problem were cracked, they could not be brought into the transport network of civilization for untold millennia. No, they were truly lost—a race under sentence of extinction. The reorganization necessary was *frightening* in its complexity, even to him. Teaching them to build and use the equipment of his ship would be utterly useless, since it was entirely metallic, and they would be even worse off than with their organic devices.

They were already, probably by chemical means, stripping ores more efficiently than his own people, so he could hardly help them there. No, it was a virtual certainty that, when the planet's crust began to heave as giant bathyliths built up beneath it, when rivers of lava poured from vents scattered over the planet, no one would be there to face it.

This was a relief, in a way. The agent could picture, all too vividly, the plight of seeing a close friend engulfed only a few miles away, and having to spend hours or years of uncertainty, wondering when his own area would be taken—and then knowing.

That was the worst. There was plenty of warning, as far as awareness was concerned. Anywhere

from minutes to years and millennia, if one was a really good computer. You knew, and if you had a mobile machine, you could move out of the way. Even these organic machines traveled fast enough for that. But *only* machines would let a being get out of the way—and there would be no machines here by then.

He wished with every atom of his being that he had never detected the poachers, had never seen this unfortunate planet or heard of its race. No good had come of it—or very little, anyway. There would, admittedly, be metal here before long, brought up with the magma flows, borne by subcrustal convection-currents in the stress-fluid that formed most of the worlds bulk.

The poachers would be coming back for it, and he could at least deprive them of that. He would beam a report in toward the heart of the galaxy, making sure it did not radiate in the direction they had taken. Then there would be freighters to forestall them.

It was ironic, in a way. If any of this race should have survived the disturbance that would bring back the metal, that disturbance would be the salvation both of their species and their civilization. Most probably, however, the only witnesses would be a few half-starved, dull-minded barbarians, who would wonder, dimly, what

was happening for a little while before temblors shattered their bodies forever.

There was nothing to keep him here, and the place was distasteful. More of the organic robots were approaching his position, but he did not want to talk any more. He wanted to forget this planet, to blot the memory of it forever from his mind.

With abrupt determination, he sent the dirt boiling away from his hull in a rising cloud of dust, pointed his vessel's blunt nose into the zenith and applied the drive. He held back just enough to keep his hull temperature within safe limits, while he was still in the atmosphere.

Then, with detectors fanning out ahead, he swung back to the line of his patrol orbit, and began accelerating away from the Solar system. Ignorant of events behind him, he never sensed the flight of swept-winged metal machines that hurtled close below while he was still in the air, split seconds after he had left the ground.

He did not notice the extra radar beam that fastened itself on his hull, while the machine projecting it flung itself through the sky, computing an interception course. This was too bad, for the relays in that machine would have made him feel quite at home, and its propulsion mechanism would have given him more food for thought.

He might have sensed its detonation, for his pursuer had a nuclear warhead. But its built-in brain realized, as quickly as the agent himself could have, that no interception was possible within its performance limits. It gave up, shutting off its fuel and curving back toward its launching station. Even the aluminum alloys in its hull would have interested the agent greatly—but he was trying to think of anything except Earth, its inhabitants and their *appalling* technology.

His patrol orbit would carry him back to this vicinity in half a million years or so. The freighters would have been there by that time.

He wondered if he could bring himself to look at the dead world.

IT WAS THE general who explained it to the Parsons, at the University a few weeks later. He said, "He must have been in the devil's own hurry. All he did was get his warning through, take a quick look at Anaconda, and zoom off. Ground-to-Air sent up a nuclear rocket to intercept him, but he got clear of it just in time, thank God! Plenty of heads rolled after that foul-up, I can assure you. Trigger-happy idiots they were!"

Candace, looking exceptionally attractive in a new, soft-blue linen dress which almost miraculously complemented both her figure

and her coloring, said, "I'm glad, too. It must have had something to do with his intuitive alertness, from what I've been able to gather. Perhaps, he thought this world was going to blow up at any minute."

"Hah!" said General Eades. "We've already located nine of those damned underground borers he told us about. At the rate *they're* moving, our fiftieth-generation descendants will be out in space themselves before anything catastrophic happens. We'll have the whole bunch spotted and disarmed by that time."

He paused, chuckled again and added, "The weird part of it is that twenty-seven of the damned monsters are doing their stuff under Iron Curtain soil."

Hal Parsons spoke thoughtfully. "I've been reading some of the pull-together reactions in the headlines, General. Won't all this put you out of a job?"

"Not for a while," said Eades. "Actually, I hope so. No responsible soldier wants war—ever. Makes our uniforms too dusty."

"I still wish I knew how he produced that rain," said Candace. "I've added meteorology to my other duties, hoping to get to the bottom of it."

"Probably, he was just taking a bath," said Eades. He puffed on his cigar meditatively and added, "It's good to know you got a full professorship out of it, Par-

sons—and that you're on your way to one yourself, Mrs. Parsons." He fingered the new, bright extra star on his own collar, then asked, "What happened to the big, good-looking kid you had with you? I thought for sure he'd be in Hollywood by now."

"Oh—poor Truck," replied Candace. "He was all set to go. But he wanted to play in the homecoming game first. He broke his nose, and right now the movie brass isn't interested. But he doesn't seem to mind. He's making

out fine with one of those cute little red-headed co-eds on the campus."

"I'm glad to hear it," said the general. He paused, frowning. "You know, it's funny—but ever since that damned metal monster flew out of our lives, I feel as if I'd lost a friend."

"I feel the same way," said Hal.

"I guess we all do," said Candace. She was much too wise, being a woman, to add, "I told you so."

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●

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THE LAST WORD



It was the dreaded moment of Lucifer's victory over Man. The world lay ruined by war—but one human pair still lived.

by DAMON KNIGHT

THE FIRST WORD, I like to think, was "Ouch!" Some caveman, trying to knock a stone into a closer fit with another stone, hit his thumb—and there you were—language!

I have an affection for these useless and unverifiable facts. Take the first dog—he, I feel sure, was an unusually clever but cowardly wolf who managed to terrorize early Man into throwing him a scrap. Early man was a terrible coward, himself. Man and wolf discovered that they could hunt together, in their cowardly fashion, and there you were again—domesticated animals!

I admit that I was lax during the first few thousand years. By the time I realized that Man needed

closer supervision, many of the crucial events had already taken place. I was then a young—well, let us say a young fallen angel. Had I been older and more experienced, history would have turned out very differently.

There was that time when I happened across a young Egyptian and his wife, sitting on a stone near the bank of the Nile. They looked glum—the water was rising. A hungry jackal skulked not far away, and it crossed my mind that, if I distracted the young people's attention for a few minutes, the jackal might surprise them.

"High enough for you?" I asked agreeably, pointing to the water.

They looked at me rather sharply. I had put on the appear-

ance of a human being, as nearly as possible, but the illusion was no good without a large cloak, which was too hot for the time of year.

The man said, "If it never got any higher, it would suit me."

"Why, I'm surprised to hear you say that!" I replied. "If the river didn't rise, your fields wouldn't be so fertile—isn't that right?"

"True," said the man, "but also, if it didn't rise, my fields would still be my fields." He showed me where the water was carrying away his fences. "Every year, we argue over the boundaries, after the flood, and, this year, my neighbor has a cousin living with him. The cousin is a big, unnecessarily muscular man." Broodingly, he began to draw lines in the dirt with a long stick.

These lines made me a little nervous. The Sumerians, up north, had recently discovered the art of writing, and I was still suffering from the shock.

"Well, life is struggle," I told the man soothingly. "Eat or be eaten. Let the strong win, and the weak go to the wall."

The man did not seem to be listening. "If there was some way," he said, staring at his marks, "that we could keep tally of the fences, and put them back exactly the way they were before—"

"Nonsense," I interrupted. "You're a wicked boy to suggest such a thing. What would your old

dad say? Whatever was good enough for him . . ."

All this time, the woman had not spoken. Now she took the long stick out of the man's hand and examined it curiously.

"But why not?" she said, pointing to the lines in the dirt. The man had drawn an outline roughly like that of his fields, with the stone marking one corner.

It was at that moment that the jackal charged. He was gaunt and desperate, and his jaws were full of sharp yellow teeth.

With the stick she was holding, the woman hit him over the snout. The jackal ran away, howling pitifully.

"Tut!" I said, taken aback. "Life is struggle—"

The woman said a rude word, and the man came at me with a certain light in his eye, so I went away. When I came back after the next flood, they were measuring off the fields with ropes and poles.

Cowardice again—that man did not want to argue about the boundaries with his neighbor's muscular cousin. Another lucky accident, and there you were—geometry!

If only I had had the foresight to send a cave bear after the first man who showed that original, lamentable spark of curiosity . . . Well, it was no use wishing. Not even I could turn the clock back.

Oh, I gained a few points as time went on. Instead of trying to suppress the inventive habit, I

learned to direct it along useful lines. I was instrumental in teaching the Chinese how to make gunpowder—seventy-five parts saltpeter, thirteen parts brimstone, twelve parts charcoal, if you're interested. But the grinding and mixing are terribly difficult—they never would have worked it out by themselves.

When they used it only for fireworks, I didn't give up—I introduced it again in Europe. Patience was my long suit—I never took offense. When Luther threw an inkwell at me. I was not discouraged. I persevered.

I did not worry about my occasional setbacks—strangely, it was my successes that threatened to overthrow me. After each of my wars, there was an impulse that drew men closer together. Little groups fought each other until they formed bigger groups—then the big groups fought each other until there was only one left.

I had played this game out over and over, with the Egyptians, the Persians, the Greeks, and, in the end, I had destroyed every one. But I knew the danger. When the last two groups spanned the world between them, the last war might end in universal peace, because there would be no one left to fight.

My final war would have to be fought with weapons so devastating, so unprecedentedly awful, that man would never recover from it.

It was so fought.

On the fifth day, riding the gale, I could look down on a planet stripped of its forests, its fields, even its topsoil. There was nothing left, but the bare, riven rock, cratered like the Moon. The sky shed a sickly purple light, full of lightnings that flickered like serpents' tongues. Well, I had paid a heavy price, but Man was gone.

Not quite, as it developed—there were two left, a man and a woman. I found them, alive and healthy for the time being, on a crag that overhung the radioactive ocean. They were inside a transparent dome, or field of force, that kept out the contaminated air.

You see how nearly I had come to final defeat? If they had managed to distribute that machine widely before my war started . . . But this was the only one they had made. And there they were, inside it, like two white mice in a cage.

They recognized me immediately. The woman was young and comely, as they go. She was called Ava Something-or-other—I didn't catch her husband's name. Gardiner, or something like that.

"This is quite an ingenious device," I told them courteously. In actuality, it was an ugly thing, all wires and tubes and so on, packed layers deep under the floor, with a big semicircular control board and a lot of flashing lights. "It's a pity I didn't know about it earlier—we might have put it to some use."

"Not this one," said the man

grimly. "This is a machine for peace. Just incidentally, it generates a field that will keep out an atomic explosion."

"Why do you say, 'just incidentally?' " I asked him.

"It's only the way he talks," the woman said quickly. "If you had held off another six months, we might have beaten you. But now, I suppose, you think you've won."

"Oh, indeed!" I said. "That is, I will have, before long. Meanwhile, we might as well make ourselves comfortable."

They were standing in tense, defensive attitudes, in front of the control board, and took no notice of my suggestion.

"Why do you say I 'think' I've won?" I asked.

"It's just the way I talk," she replied. "Well, at least, we gave you a long fight of it."

The man put in, "And now you're brave enough to show yourself." He had a truculent jaw. There had been a good many like him in the assault planes, on the first day of the war.

"Oh," I said, "I've been here all the time."

"From the very beginning?" the woman asked.

I bowed to her. "Almost," I said, to be strictly fair.

There was a little silence, one of those uncomfortable pauses that interrupt the pleasantest of talks. A tendril of glowing spray sprang up just outside. After a moment,

the floor settled slightly under us.

The man and woman looked anxiously at their control board. The colored lights were flashing.

"Is that the accumulators?" I heard the woman ask in a strained, low voice.

"No," the man answered, "they're all right—still charging. Give them another minute."

The woman turned to me. I was glad of this, because there was something about their talk together that disturbed me. She said, "Why couldn't you let things alone? Heaven knows we weren't perfect, but we weren't *that* bad. You didn't have to make us do that to each other."

I smiled. The man said slowly, "Peace would have poisoned him. He would have shriveled up like a dried apple."

It was the truth, or near enough, and I did not contradict him. The floor lurched again.

"You're waiting to watch us suffer," the woman said. "Aren't you?" I smiled. She added, "But that may take a long time. Even if we fall into the ocean, this globe will keep us alive. We might be in here for months before our food gives out."

"I can wait," I said pleasantly.

She turned to her husband. "Then we *must* be the last," she said. "Don't you see? If we weren't, would he be here?"

"That's right," said the man, with a note in his voice that I did

not like. He bent over the control board. "There's nothing more to keep us here. Ava, will you . . . ?" He stepped back, indicating a large red-handled switch.

The woman stepped over and put her hand on it.

"One moment," I said uneasily. "What are you *doing*? What *is* that thing?"

She smiled at me. "This isn't just a machine to generate a force field," she said.

"No?" I asked. "What else?"

"It's a Time Machine," the man said.

"We're going back," the woman whispered, "to the beginning."

Back, to the beginning, to start all over.

Without me, they were going.

The woman said, "You've won Armageddon, but you've lost Earth."

I knew the answer to that, of course, but she was a woman and had the last word and I let her have it.

I gestured toward the purple darkness outside. "Lost Earth? What do you call this?"

She poised, her hand on the switch. "Hell," she said.

I have remembered her voice as she said it, through ten thousand lonely years.



"The Magazine that is a Book!"

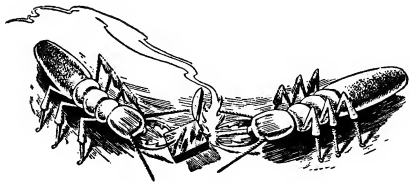
BRINGS YOU AN UNUSUAL SCIENCE FICTION COMPLETE NOVEL IN THE NEXT ISSUE

By IRVING W. LANDE and FRANK BELKNAP LONG

THE NEXT TENANTS

We can expect to hear odd confessions over a bar. However, mercifully seldom are they as strange or quite as terrifying as this one.

by ARTHUR C. CLARKE



THE NUMBER of mad scientists who wish to conquer the world," said Harry Purvis, looking thoughtfully at his beer, "has been grossly exaggerated. In fact, I can remember encountering only a single one."

"Then there couldn't have been many others," commented Bill

Temple, a little acidly. "It's not the sort of thing one would be likely to forget."

"I suppose not," replied Harry, with that air of irrefragible innocence which is so disconcerting to his critics. "And, as a matter of fact, this scientist wasn't really mad. There was no doubt, though,

that he was out to conquer the world. Or, if you want to be really precise—to let the world be conquered.”

“And by whom?” asked George Whitley. “The Martians? Or the well-known little green men from Venus?”

“Neither of them. He was collaborating with someone nearer home. You’ll realize who I mean when I tell you he was a myrmecologist.”

“A which-what?” asked George.

“Let him get on with the story,” said Drew, from the other side of the bar. “It’s past ten, and, if I don’t get you all out by closing time *this* week, I’ll lose my license.”

“Thank you,” said Harry with dignity, handing over his glass for a refill. “This all happened some years ago, when I was on a mission in the Pacific. It was rather hush-hush, but, in view of what’s happened since, there’s no harm in talking about it.

“Three of us scientists were landed on a certain Pacific atoll, not a thousand miles from Bikini, and given a week to set up some detection equipment. It was intended, of course, to keep an eye on our good friends and allies, when they started playing with thermo-nuclear reactions—to pick some crumbs from the A.E.C.’s table, as it were. The Russians, naturally, were doing the same thing, and occasionally we ran in-

to each other. Then both sides would pretend that there was nobody here but us chickens.

“This atoll was supposed to be uninhabited, but this was a considerable error. It actually had a population of several hundred million—”

“*What?*” gasped everybody.

“—several hundred millions,” continued Purvis calmly, “of which number, one was human. I came across him when I went inland one day, to have a look at the scenery.”

“Inland?” asked George Whitley. “I thought you said it was an atoll. How can a ring of coral—”

“It was a very plump atoll,” said Harry firmly. “Anyway, who’s telling this story?” He waited defiantly for a moment, until he had the right of way again.

“Here I was, walking up a charming little river-course underneath the coconut palms, when, to my great surprise, I came across a waterwheel—a very modern-looking waterwheel, driving a dynamo. If I’d been sensible, I suppose I’d have gone back and told my companions, but I couldn’t resist the challenge, and decided to do some reconnoitering on my own. I remembered that there were still supposed to be Japanese troops around, who didn’t know that the war was over, but that explanation seemed a bit unlikely.

“I followed the power-line up a hill, and there, on the other side,

was a low, whitewashed building, set in a large clearing. All over this clearing were tall, irregular mounds of earth, linked together with a network of wires. It was one of the most baffling sights I have ever seen, and I stood there and stared for a good ten minutes, trying to decide what was going on. The longer I looked, the less sense it seemed to make.

"I was debating what to do, when a tall, white-haired man came out of the building and walked over to one of the mounds. He was carrying some kind of apparatus and had a pair of ear-phones slung around his neck, so I guessed that he was using a Geiger counter. It was just about then that I realized what those tall mounds were. They were termintaries—skyscrapers, in comparison to their makers, far taller than the Empire State Building, in which the so-called white ants live.

"I watched with great interest, but complete bafflement, while the elderly scientist inserted his apparatus into the base of the termintary, listened intently for a moment, and then walked back towards the building. By this time, I was so curious that I decided to make my presence known. Whatever research was going on here obviously had nothing to do with international politics, so I was the only one who'd have anything to hide. You'll appreciate later just what a miscalculation *that* was.

"I yelled for attention and walked down the hill, waving my arms. The stranger halted and watched me approaching, he didn't look particularly surprised. As I came closer, I saw that he had a straggling mustache that gave him a faintly Oriental appearance.

"He was about sixty years old, and carried himself very erect. Though he was wearing nothing but a pair of shorts, he looked so dignified that I felt rather ashamed of my noisy approach.

"'Good morning,' I said apologetically. 'I didn't know there was anyone else on this island. I'm with an—er—scientific survey party over on the other side.'

"At this, the stranger's eyes lit up. 'Ah!' he said, in almost perfect English. 'A fellow scientist! I'm very pleased to meet you. Come into the house.'

"I followed gladly enough—I was pretty hot after my scramble—and I found that the building was simply one large lab. In a corner were a bed and a couple of chairs, together with a stove and one of those folding wash-basins campers use. That seemed to sum up the living arrangements. But everything was very neat and tidy. My unknown friend might be a recluse, but he believed in keeping up appearances.

"I introduced myself first, and, as I'd hoped, he promptly responded. He was one Professor Takato, a biologist from a leading

Japanese university. He didn't look particularly Japanese, apart from the mustache I've mentioned. With his erect, dignified bearing, he reminded me rather of an old Kentucky colonel I once knew.

"After he'd given me some unfamiliar but refreshing wine, we sat and talked for a couple of hours. Like most scientists, he seemed happy to meet someone who could appreciate his work. It was true that my interests lay in physics and chemistry, rather than on the biological side, but I found Professor Takato's research quite fascinating.

"I don't suppose you know much about termites, so I'll remind you of the salient facts. Termites are among the most highly evolved of the social insects, and live in vast colonies throughout the tropics. They can't stand cold weather nor, oddly enough, can they endure direct sunlight.

"When they have to travel from one place to another, they construct little covered roadways. They seem to have some unknown and almost instantaneous means of communication, and, though the individual termites are pretty helpless and dumb, a whole colony behaves like an intelligent animal.

"Some writers have drawn comparisons between a termitary and a human body, which is also composed of individual living cells, making up an entity much higher than the basic units. The termites

are often called 'white ants', but that's a completely incorrect name. They aren't ants at all, but quite a different species of insect—or should I say 'genus'? I'm pretty vague about this sort of thing.

"Excuse this little lecture, but, after I listened to Takato for a while, I began to get quite enthusiastic about termites myself. Did you know, for example, that they not only cultivate gardens, but also keep cows—insect cows, of course—and milk them? Yes, they're sophisticated little devils, even though they do it all by instinct.

"But I'd better tell you something about the Professor. Although he was alone at the moment, and had lived on the island for several years, he had a number of assistants, who brought equipment from Japan and helped him in his work. His first great achievement was to do for the termites what von Frische had done with bees—he'd learned their language. It was much more complex than the system of communication that bees use, which, as you probably know, is based on dancing.

"I understood that the network of wires linking the termitaries to the lab not only enabled Professor Takato to listen to the termites talking among themselves, but also permitted him to speak to them. That's not really as fantas-

tic as it sounds, if you use the word "speak" in its widest sense.

"We speak to a good many animals—not always with our voices, by any means. When you throw a stick for your dog and expect him to run and fetch it, that's a form of speech—sign language. The Professor, I gathered, had worked out some kind of code which the termites understood, though how efficient it was at communicating ideas I didn't know.

"I came back every day, when I could spare the time, and, by the end of the week, we were firm friends. It may surprise you that I was able to conceal these visits from my colleagues, but the island was quite large, and we each did a lot of individual exploring. I felt, somehow, that Professor Takato was my private property. I did not wish to expose him to the curiosity of my companions. They were rather uncouth characters—graduates of some provincial non-specialized universities like Oxford or Cambridge.

"I'm glad to say that I was able to give the Professor a certain amount of assistance, helping him fix his radio and line up some of his electronic gear. He used radioactive tracers a good deal, to follow individual termites around. He'd been tracking one with a Geiger counter when I first met him, in fact.

"Four or five days after we met,

his counters began to go haywire, and the equipment we'd set up began to reel in its recordings, Takato guessed what had happened—he'd never asked me exactly what I was doing on the island, but I think he knew. When I greeted him, he switched on his counters and let me listen to the roar of radiation. There had been some radioactive fall-out—not enough to be dangerous, but enough to bring the background way up.

" 'I think,' he said softly, 'that you physicists are playing with your toys again. And very big ones, this time.'

" 'I'm afraid you're right,' I replied. 'We couldn't be sure until the readings had been analyzed, but it looked as if Teller and his team had begun the hydrogen reaction. 'Before long, we'll be able to make the first A-bombs look like damp squibs.'

" 'My family,' said Professor Takato, without any visible emotion, 'was at Nagasaki.'

" 'There wasn't a great deal I could say to that, and I was glad when he went on to add, 'Have you ever wondered who will take over when we are finished?'

" 'Your termites?' I countered, half facetiously. He seemed to hesitate for a moment. Then he said quietly, 'Come with me—I have not shown you everything.'

"We walked over to a corner of the lab, where some equipment

lay concealed beneath dust-sheets, and the Professor uncovered a rather curious piece of apparatus. At first sight, it looked like one of the manipulators used for the remote handling of dangerously radioactive materials. There were handgrips that conveyed movements through rods and levers, but everything seemed to focus on a small box, a few inches long on each side.

"What is it?" I asked.

"It's a micromanipulator. The French developed them for biological work. There aren't many around yet."

"Then I remembered. These were devices with which, by the use of suitable reduction gearing, one could carry out the most incredibly delicate operations. You moved your finger an inch—and the tool you were controlling moved a thousandth of an inch."

"The French scientists who had developed this technique had built tiny forges, on which they could construct minute scalpels and tweezers from fused glass. Working entirely through microscopes, they had been able to dissect individual cells. Removing an appendix from a termite—in the highly doubtful event of the insect possessing such an organ—would be child's play with such an instrument."

"I am not very skilled at using the manipulator," confessed Taka-

to. "One of my assistants does all the work with it. I have shown this to no one else, but you have been very helpful. Come with me, please."

"We went out into the open, and walked past the avenues of tall, cement-hard mounds. They were not all of the same architectural design, for there are many different kinds of termites—some, indeed, don't build mounds at all. I felt rather like a giant walking through Manhattan, for these were skyscrapers, each with its own teeming population."

"There was a small piece of metal—not wooden, for the termites would soon have fixed that—beside one of the mounds. As we entered it, the glare of sunlight was banished. The Professor threw a switch, and a faint red glow enabled me to see various types of optical equipment."

"They hate light," he said, "so it's a great problem observing them. We solved it by using infra-red. This is an image-converter of the type that was used in the war for operations at night. You know about them?"

"Of course," I said. "Snipers had them fixed on their rifles, so they could go sharpshooting in the dark. Very ingenious things—I'm glad you've found a civilized use for them."

"It was a long time before Professor Takato found what he wanted. He seemed to be steering

some kind of periscope, probing through the corridors of the termite city. Then he said, 'Quickly—before they've gone!'

"I moved over and took his position. It was a second or so before my eye focused properly, and longer still before I understood the scale of the picture I was viewing. Then I saw six termites, greatly enlarged, moving rather rapidly across the field of vision. They were traveling in a group, like the huskies forming a dog-team. This was a very good analogy, because they were towing a sledge.

"I was so astonished that I never even noticed what kind of load they were moving. When they had vanished from sight, I turned to Professor Takato. My eyes had now grown accustomed to the faint red glow, and I could see him quite well.

"'So that's the sort of tool you've been building with your micromanipulator!' I said. 'It's amazing! I'd never have believed it.'

"'But that is nothing,' replied the Professor. 'Performing fleas will pull a cart. I haven't told you what is so important. We only made a few of those sledges. *The one you just saw they constructed themselves.*'

"He let that sink in. It took some time. Then he continued quietly, but with a kind of controlled enthusiasm in his voice,

'Remember that termites, as individuals, have virtually no intelligence. But the colony as a whole is a very high type of organism—an immortal one, barring accidents.

"'It froze in its present instinctive pattern millions of years before Man was born, and, by itself, it can never escape from its present sterile perfection. It has reached a dead-end—because it has no tools, no effective way of controlling nature.

"'I have given it the lever to increase its power, and now the sledge to improve its efficiency. I have thought of the wheel, but feel it best to let that wait for a later stage—it would not be very useful now. The results have exceeded my expectations. I began, with the termitary alone—but now they all have the same tools. They have taught each other, and that proves they can co-operate. True, they have wars—but not when there is enough food for all, as there is here.

"'But you cannot judge the termitary by human standards. What I hope to do is to jolt its rigid, frozen culture—to knock it out of the groove in which it has stuck for so many millions of years. I will give it more tools, more techniques—and, before I die, I hope to see this organism beginning to invent things for itself.'

"'Why are you doing this?' I asked, for I knew there was more

than mere scientific curiosity here.

"'Because I do not believe that Man will survive, yet I hope to preserve some of the things he has discovered. If he is to be a dead-end, I think another race should be given a helping hand. Do you know why I chose this island? It was so that my experiment should remain isolated. My supertermite, if it ever evolves, will have to remain here until it has reached a very high level of attainment. Until it can cross the Pacific, in fact . . .

"'There is another possibility. Man has no rival on this planet. I think it may do him good to have one. It may be his salvation.'

"I could think of nothing to say. This glimpse of the Professor's dream was so overwhelming—yet, in view of what I had just seen, so convincing. For I knew that Professor Takato was not mad. He was a visionary, and there was a sublime detachment about his outlook, but it was based on a secure foundation of scientific achievement.

"It was not that he was hostile to mankind—he was sorry for Man. He simply believed that humanity had shot its bolt, and wished to save something from the wreckage. I could not feel it in my heart to blame him.

"We must have been in that little hut for hours, exploring possible futures. I remember suggest-

ing that, perhaps, there might be some kind of mutual understanding, since two cultures so utterly dissimilar as Man and Termite need have no cause for conflict. But I couldn't really believe this, and, if a contest comes, I'm not certain who will win. For what use would man's weapons be against an intelligent enemy who could lay waste all the wheat-fields, all the rice-crops in the world?

"When we came out into the open once more, it was almost dusk. It was then that the Professor made his final revelation.

"'In a few weeks,' he said, 'I am going to take the biggest step of all.'

"'And what is that?' I asked.

"'Cannot you guess? I am going to give them fire.'

"Those words did something to my spine. I felt a chill that had nothing to do with the oncoming night. The glorious sunset beyond the palms seemed symbolic—and, suddenly, I realized that the symbolism ran even deeper than I had thought.

"That sunset was one of the most beautiful I had ever seen, and it was partly of man's making. Up there in the stratosphere, the dust of an island that had died this day was encircling the earth. My race had taken a great step forward—but did it matter now?

"'I am going to give them fire.' Somehow, I never doubted that

the Professor would succeed. When he had done so, the forces that my own race had just unleashed would not save it.

"The flying boat came to collect us the next day, and I did not see Takato again. He is still there, and I think he is the most important man in the world. While our politicians wrangle, he is making us obsolete.

"Do you think that someone

ought to stop him? There may still be time. I've often thought about it, but I've never been able to think of a really convincing reason for my interfering. Once or twice, I nearly made up my mind, but then I'd pick up the newspaper and see the headlines.

"I think we should let them have the chance. I don't see how they could make a worse job of it than we've done."

MIKE SHAYNE'S LATEST BOOK



"Weep for a Blonde Corpse"

by Brett Halliday

●

Science fiction readers seldom can be kept away from the best in mystery fiction. They'll follow a long trail, if need be, to seek it out. But now the trail is short indeed, and the best is right at hand in the current issue of SATELLITE's monthly companion on the high road to peak reading pleasure excitement, MICHAEL SHAYNE MYSTERY MAGAZINE. And the biggest thrill of all is a brand new Mike Shayne novel, starting with this issue and continuing on through two more generous installments. If you don't want to miss a single breathless, dropped heartbeat of Shayne's fierce intanglement with blondes and bullets and a false accusation of murder the time to hop on the bandwagon is now, immediately.

JOHN VICTOR PETERSON

The general was a stranger at the H-bomb test—

but so was the object that hovered close overhead!

FOOD FOR THE VISITOR

IT WAS H-HOUR minus ten minutes at Yucca Flat, Nevada. I lay in a slit trench, five miles from ground zero, wishing I were back with Colonel Kitchell at Battalion Headquarters—a concrete blockhouse—or, better still, seventy-five miles away in a Las Vegas bar.

Things were too snafu for my taste. The weather had been bad for days. There was a high overcast now. To top things, with M-minute coming up, my walkie-talkie had quit. I was stymied: I'm a line sergeant, not an electronics tech. The colonel, waiting to give orders and receive my reports, wouldn't take kindly to my oversight in neglecting to bring a tech along.

I lay there, getting more nervous by the second, alternating my gaze between my wristwatch and the faraway steel tower holding the bomb, and wishing the unidentified flying object would come around to liven things up.

I peered up at the clouds and, completely unexpected, a heavy hand fell on my shoulder. I'm glad my nerves weren't too taut. At zero, I don't know what I would have done.

As it was, I cursed my platoon silently for not warning me and slowly twisted around nearly to rub noses with a prone and apparently triumphant individual whose helmet bore a brigadier general's star.

"Alertness is important, Sergeant," he said sharply. "We're simulating combat conditions, you know."

"I think I'm covered sir," I said, trying not to sound flippant as I hopefully looked past him. Fortunately, Corporals Herrmann and Zuewski had kept alert. Both had their submachineguns at the ready.

The general twisted around, spluttered, and said, "I saw your men, of course!"

I don't argue with officers.

"Your name, Sergeant?"



"Parker, sir—Wesley Parker."

"And your part in the mission?"

"Guinea pig," I told him, saying what I felt. "Five miles from ground zero. Medium H-bomb. We expect total destruction up to four miles. Not that there's much on this desert to destroy except humans. If the blast doesn't get us, the fallout will—unless the wind shifts, of course. Weather forecast a dead calm, but we've a twenty mile wind straight in the face. The walkie-talkie just fizzed, so we couldn't get withdrawal orders, even if there were any."

I hoped he'd suggest we withdraw, but he simply grunted, bit his lower lip and looked up at the overcast. Then a strange expression came upon his face.

"Damnably strange reflection, that," he said. "But with no break in the clouds, it couldn't be a re-

flection. Searchlight, I guess . . ."

I looked up, too, and chuckled.

"That's no searchlight, sir," I explained. "That's our UFO friend."

"UFO friend?"

I already suspected he was new to the area.

"We call it the UFO of Yucca," I said patiently. "It's been circling over the Flat, ever since they brought the bomb up from Los Alamos last week. I've been watching it every time it's been around and, funny thing, it's getting dimmer! Project reports describe them as glowing, as if incandescent. This one's a weak sister, I'd say."

"But, damn it, Parker!" he burst out, "hasn't someone investigated it? This warrants cancellation of the test!"

"Why? There's no positive proof a UFO's unfriendly, or not a nat-

ural phenomenon. Anyway, you know more about this than I!"

He winced. "I'm afraid I'm a Johnny-come-lately here, Parker. My last physical was my last, as far as the army's concerned. This is an old soldier's—my holiday. Although General Steuerwalt cleared me into the area, I'm afraid I wasn't fully briefed."

I'd been watching him as he talked and recognized him—James "Bull" O'Brien, a hero in the Philippines and, later, in Korea. We had heard a lot about him, in our training at Fort Benning. I felt sorry for him now, gallant old infantryman that he was.

"Incandescent," he murmured.

I was momentarily dumbfounded. "Oh, the saucer, you mean, sir! Well, they've chased it with XF-150 Sunbeaters at two thousand m.p.h. and weren't even getting close until yesterday. Then they were gaining, until it took evasive action into clouds. Strange, but it keeps coming back, as if waiting for the big bang."

General O'Brien's gaze was quizzical. "Maybe it is. Observing—checking on our weapons progress."

He pursed his lips, thinking, silent. We watched the UFO flutter dimly against a dark cloud mass.

I looked at my watch. One minute to zero!

The general was wholly absorbed with the UFO.

I shook the walkie-talkie, and Colonel Kitchell's voice abruptly came from it. ". . . above all, use your protective glasses. Do not look directly at the blast. Keep completely below blast level. The countdown will begin in seconds."

General O'Brien abruptly decided that my slit trench was big enough for both of us. We weren't breathing very deeply anyway. The countdown had begun.

". . . three, two, one, zero!"

The UFO pulsed dimly against the Nevadan sky.

The dark afternoon turned into a seething maelstrom of pink, yellow, crimson, orange and purple, the ground-blast a pink-yellow-pink sandwich, a crimson shaft supporting the crimson roiling fireball shot with orange and yellow, purple streamers darting spaceward . . .

The UFO was diving through the deep purple at the fireball, a fluttering moth courting a cosmic flame, then recoiling, agleam with new light, flinging itself spaceward with far more incredible speed than the climbing mushroom cloud.

"General," I cried, "it's brighter, stronger!"

"Yes," he said, "it *was* weak before, apparently too exhausted from its trip here to leave until it had fed. Now it has gone home."

"Home?" I asked, not puzzled but seeking his accord.

"Home to the sun," he said, "where else?"

THE SCIENCE FICTION COLLECTOR

Lively news about timely books and other pertinent science and fantasy information for the serious reader and avid collector.

by **SAM MOSKOWITZ**



TOMORROW AND TOMORROW by Hunt Collins. Pyramid Books, New York: 190 pages, \$.35 . . . Hunt Collins is Evan Hunter. His definitive, best-selling novel of teen-age delinquency, *The Blackboard Jungle*, was made into an outstanding motion picture. Hunter is equally at home in the science fiction and mystery fields. A good many science fiction readers will recognize this novel as an elaboration of Hunter's memorable magazine story *Malice in Wonderland*. If we are to categorize the book, it follows in the tradition of Huxley's *Brave New World*, with the influence of Bester's *Demolished Man* strong upon it. The story follows the general

pattern of the current popular dope addiction, alcoholism and huckstering novels.

Hunter's future world legalizes the taking of dope which is government-inspected, and it also sponsors a machine through which sensual delights can be seen, felt, heard and smelled. Some of its citizens even regard eating as a disgusting habit to be indulged in with the utmost privacy. All this takes place within an economic framework not unlike our contemporary one.

Hunter works hard for his realism. He even attempts to improvise slang of the future, which,

All books, special publications and science fiction news items indicated for review in this new column should be addressed to Sam Moskowitz, Science Fiction Collector, 127 Shephard Avenue, Newark 12, N. J.

though interesting, compels one to approach *Tomorrow and Tomorrow* with a little extra concentration. Typesetting tricks, odd snatches of verse, and technical rhetorical gimmicks are used rather unwisely at times for emphasis. He disregards the fact that his basic story elements are already so bizarre that the tricky prose effects should be used to soften—not to heighten—the strangeness.

Despite this, and overlooking the fact that today's trend has turned to science fiction of a somewhat different variety, *Tomorrow and Tomorrow* is a truly fascinating and eminently readable book.

NERVES by Lester Del Rey. Ballantine Books, New York: 153 pages, \$.35 . . . This book cannot be properly reviewed without considering the author's history. Lester Del Rey rose to initial popularity by writing science fiction and fantasy with a predominant note of quite genuine sentimentality. His stories were characterized by a high degree of human emotion, which generated a real feeling of empathy between the reader and the lead characters.

There was the female robot who fell in love with a human; the intelligent dogs of the future who attempted to transform apes into the image of men whom they loved; the ancient god Pan who returned to find success in a modern jazz band; and the strange,

bitter pride of the last Neanderthal man befriended by the Cro-magnons. All are infused with the magic of credibility by Del Rey's special talent.

Nerves, on the other hand, is a complete departure from the type of story that brought Del Rey his early success. It is a tersely dramatic story, devoid of wishful thinking and stripped down to such a hard realistic core that at times it is impossible to tell where reality ends and fiction takes over. The scene is laid in an atomic energy conversion plant where an experimental product has gotten beyond control. The only man who can prevent destruction to the entire continent is buried in a lead coffin under a mass of radioactive debris. The fight to reach him, to save him from radioactivity, and eventually, to secure the continent against atomic disaster represents one of Del Rey's finest achievements. Readers familiar with the story in its original appearance will find the book doubled in length without any apparent loss of pace or story impact.

TALBOT MUNDY BIBLIO by Bradford M. Day. Science-Fiction and Fantasy Publications, 127-01 116th Avenue, South Ozone Park, 20, N. Y.: twenty-eight pages, mimeographed, \$.50 . . . Talbot Mundy, a veteran, seasoned weaver of adventure tales for over

thirty years, had a rare gift of the occult and an appeal similar to that of the late H. Rider Haggard. Few of his titles are in print and such famous tales as *Tros of Samothrace*, *Purple Pirate*, *Old Ugly Face*, and *Jimgrim* are avidly searched for by a coterie of Mundy devotees.

For such collectors, Bradford Day has rendered a most valuable service. The present bibliography, the most comprehensive to date of Mundy's works, lists his books and magazine stories and assembles an abundance of known data concerning them. In addition, associational articles accompany the material supplied by Dr. J. Lloyd Eaton and Mr. Day.

HIGHWAYS IN HIDING by George O. Smith. Gnome Press, New York: 223 pages, \$3.00 . . . Through the years of his science fiction writing, George O. Smith has been pegged as a writer who stayed inspirationally close to the electronic laboratory for a good many of his ideas. He has even been accused of letting the science completely dominate the story. In *Highways in Hiding*—far and away the finest story he has ever written—Smith deserts the physical sciences for the world of extrasensory perception, and seems to have found his medium. Few science fiction novels in the past four or five years possess the pace and high level of interest main-

tained throughout this book. And I believe *Highways in Hiding* will definitely rank high in the International Fantasy Awards as one of the best fantasy books of the year.

THE CIRCUS OF DR. LAO and Other Improbable Stories. Edited by Ray Bradbury. Published by Bantam Books, New York: 210 pages, \$.35 . . . If it is not already taken for granted, it should be reiterated that Ray Bradbury is as fine an anthologist as he is an outstanding author. It has taken Bradbury more than three years to find the time to compile his second anthology. His first, *TIMELESS STORIES FOR TODAY AND TOMORROW*, was published by Bantam Books in 1952, and proved Bradbury's ability to select fine, out-of-the-ordinary fantasies.

The Circus of Dr. Lao by Charles G. Finney, as a hard-cover book has had two American editions, and one in England. It is doubtful if more than five thousand copies were *printed* of the three combined offerings. Despite its limited sale, selective collectors of fantasy have long regarded the book as a modern masterpiece. Rereading this short novel, eleven years after the appearance of its last American edition in 1945, I find my present reaction entirely in accord with the one I expressed in a fan journal at the time:

"In the history of fantasy there has never been a book quite like *The Circus of Dr. Lao*. Its extravagant fantasy, grounded deeply in the realism of Abalone, Arizona, where the action transpires, is utterly different. You will find here and there a trace of the whimsey of Thorne Smith, the modernized mythology of L. Sprague de Camp and Fletcher Pratt, the symbolism of Cabell, and the naughty provocativeness of any number of authors. But most of all there will be a great deal of Charles Finney, and Finney is Finney and not a style copiest.

"One cannot outline the plot, because there is no plot, nor is

there a single philosophy, but rather a variety of philosophies which the author presents for comparison. To tell you that the tale is about a strange circus run by a Chinaman, starring some of the most fantastic creatures of mythology, is to make it sound trite, and *The Circus of Dr. Lao* may be called anything but trite."

In 1945 I said: "The price, five dollars, is high, but the selective collector, searching for only a few books of exceptional quality, should not hesitate to pay." What can I add now that the price is only \$.35—and eleven short stories, from distinguished sources, have been generously tossed in as a bonus?



WATCH FOR OTHER ARTHUR C. CLARKE STORIES IN FUTURE ISSUES

THE ATTIC VOICE

Sam Dundy thought his father's life was an open book—but that was before he found the strange transmitter, after Dad died.

By ALGIS BUDRYS

THE HEAVY oak-veneer desk in the attic had been the family catch-all for years. The pigeon-holes under the jammed rolltop were crammed with unimportant letters, receipted bills, circulars from the Department of Agriculture and all the other papers that might, someday, have become important but never had.

Now Sam Dundy's father was dead, collapsed over his last straight furrow, the tired heart finally pushed too far, and Sam was home from State College. There were arrangements to be made, the estate to be put in order, and his mother was unable to bring herself to it. Sunk within himself, his emotions numb, Sam had been doing the best he could.

He had gone through the main records, down in the dining room desk, but there still might be something up here in the attic that

he ought to know about—some record of a loan, or an insurance policy, that would mean another debt left behind by his father, or—Sam knew how little hope there was in this—some money due the estate.

He pulled open the bottom drawer, and lifted off a bundle of brittle yellow newspapers. Under these was a worn book, with a cheap red binding that had become faded and splotched. The imitation gold stamping was flaked and half-gone. Sam picked up the book and squinted at the title page in the dim light coming through the attic window. The attic wasn't wired.

With dusk falling, he should have brought a flashlight. But he had been doing things like that for the past two days—moving in shock, forgetting things, making mistakes, falling into long periods

of mental drifting while he stopped wherever he was and simply day-dreamed.

The book was something called *Every Farmer's Home Cyclopedia of Simple Veterinary Science*. He'd never heard of it, but he wasn't surprised. It was the kind of book salesmen were continually selling on farms, for one dollar down and thirty-five cents a week for twenty weeks. He couldn't imagine his father spending the money, but, as he leafed through the pretentiously printed, cheap paper pages, he saw the heavy underlinings and notations in the margins, done in his father's hand with a pencil stub.

Sam looked at it, weighing it in his hand, slowly shaking his head. It was like handling a piece of the past—like knowing suddenly, without any doubt, exactly what was going on inside a man's head.

Here it was—the long-forgotten first sign of his father's resolve to have him go to veterinary school, perhaps the source of it. Sam looked at the sections that had drawn most of his father's attention.

A chapter on Animal Surgery had its pages smudged from what must have been incessant reading. Sitting in the near-dark, Sam had no trouble picturing his father, in the worn armchair under the standing lamp in the parlor, with the book in his lap and his blunt

forefinger moving slowly under each line, his face set in a frown of concentration.

Lying on the table next to him would be the grammar school dictionary, most of its pages loose in the binding. At intervals, his father would hold his place with one finger while he leafed through the dictionary, either muttering the definition over and over until he had memorized it or else scowling in momentary anger when the dictionary failed to include the word that had puzzled him.

The annotations almost covered the type on some of the pages. In several places, there was a curt *Won't work*. Once or twice, he saw *Try it*, following an underscored paragraph, and he wondered what his father had been doing.

At the end of the chapter, his father had blocked in a characteristic comment—*Can't pay the price for the tools, anyway. Don't know enough to make some. Haven't got the brains to handle them right, if I did. Have to give this up and try something else*.

In the same way his father had talked to the plow and the water pump, his father had talked to the book.

Sam smiled in the dark. Every bit of work his father did was accompanied by a steady drive of short, declarative sentences. "Got-ta lift you *over* that rock . . ." "Push this part *in* here . . ."

"Gonna fence you *this* Fall . . ."

So here was the record of something else planned, possibly attempted and angrily abandoned, because there were too many things against its achievement.

At this thought, Sam's smile faded. His father's life had been overfull of such defeats. The old, hard-jawed man had fought his losing battle every step of the way, trying with strength and hard work and stubbornness to do what money would have accomplished.

Sam remembered his father's harsh snort. "If farmers had money, youngster, most of 'em wouldn't be farmers."

So here was another time his father hadn't been able to carry something through. It must have been a long time ago, because he couldn't remember it at all.

He closed the book and put it down on top of the newspapers. It would look strange, sitting on his bookshelf at college alongside the legitimate texts. But it would sit there, if he ever went back.

Sam looked down into the drawer. There was still something else in there, something that looked like a flat box in this light. He took it out, surprised to find that it was hard—not as cold as metal, but not as slickly smooth as plastic. He held it up to the fading light, but there was nothing to see except a faint seam, that marked off a lid, and a catch.

Frowning, he pushed at the little metal square, seeking to unfasten it as a pressure latch first, then trying to slide it open. It didn't work in either way. Finally, he found the hairline that divided it in two, and pushed in opposite ways. The latch opened, but, when he tried to lift the lid, it stayed locked. The catch had slipped back as soon as he let it go.

Annoyed at the designer, who seemed to have thought that people had three hands, he fumbled the lid up with his little fingers, while holding the catch open, and saw that the box was a portable radio.

He frowned at the three knobs, the dial, and the two-inch grill that were set into the surface of the box under the lid. The dial was glowing luminously, and he wondered what kind of paint had managed to store up light for so long. But he wondered more about the radio's being there at all.

There was an old Sears-Roe-buck set downstairs, sitting in the parlor, with its veneer splitting from old age. But it played well enough to get the weather bulletins and the Farm and Home Hour. Why had his father spent the money on a late-model transistor set and hidden it away up here, in the attic?

He couldn't figure out what make it was, either. The dial was hard to read—it looked like some

trick system, all symbols instead of numbers, which didn't make any sense at all. It might be a cheap Japanese set—something like that—from the looks of the symbols, but the Japs used regular American numbers on the ones they sold over here.

He tried to turn one of the knobs, and found that to do so required more strength than he had expected. It didn't seem to do anything, either. The next one moved the pointer on the dial. So the third one had to be the switch. He twisted it and felt the box begin to vibrate softly in his hands.

But nothing happened after he had waited a long minute, and he wondered if the first knob was a volume control that he had turned all the way down. He twisted it back toward its first position.

It had turned completely dark in the attic. There was still some light outside, but, toward the east, the stars were out, shining pure white in the purple-black sky.

There was a click as he reset the first knob.

Faraway, and thin, he heard: "*N'fera, n'feri, n'fero . . . n'fera, n'feri, n'fero . . . d'anclaf, n'fera.*"

There was a pause. And then, still far, still thin, but nearer, he heard the reply, in another voice as dry and rustling as the first had been soft and lilting. "*N'fera,*

socsim. Socsim. D'anclaf, n'feri."

Something frightened him. He reached out and closed the radio's lid, and sat looking up at the distant stars, wondering what language he had heard . . .

He rapped softly on his mother's door, his face troubled. He didn't want to bother her, but he had to get the radio business settled. He frowned as he tried to think of how he was going to ask her. If she didn't know anything about it, he didn't want to upset her any more.

"Who is it?"

His mother's voice was nervous and apprehensive.

"It's Sammy, Mom," he said patiently, though there was no one else it could have been. "May I talk to you for a minute?"

"Oh—Sammy. I wasn't asleep yet—just dozing. Were you upstairs?"

"Up in the attic, Mom," he reminded her.

"Looking through the old desk? Did you find anything?" she asked.

"I don't know, for sure. May I come in and talk to you?" He knew that, if he didn't remind her, she'd forget what he wanted.

"Yes, of course, Sammy." He heard her bedclothes rustle, and opened the door. There was no light on, and he blinked as he made his way to her bed and sat down on the chair beside it. He took her hand.

"How are you, Mom?" he

asked gently. He could see the paleness of her face in the dim light, and as his eyes slowly became accustomed to it, he saw that she was keeping her eyes closed. Her hand was limp in his, and her breathing was shallow.

"Pretty well," she replied wanly. The fingers of her left hand twisted at the edge of the comforter. "I think I'll be able to get to sleep all right tonight. Is everything all right on the farm."

He nodded. "Everything's fine, Mom," he answered uncomfortably, remembering. "We've got to take good care of Annie," his father had often said, shaking his head angrily, with that frequent anger which came over him, and was coming over his son, now, at things he couldn't do anything about.

"I guess there's some women shouldn't ever have to farm," he had said slowly. "But what else can we do, boy? If a man's got a farm, he's got to work it. If a man's been a farmer all his life, he's got to stick with that. But you take care of her, if I can't. You're my hope, boy. You're the best hope I've got in this world."

"Did you find anything in the attic, Sammy?" his mother asked, forgetting again.

She hadn't been made for a life of never having enough, Sam thought to himself. She wasn't intended to live as she had had to for thirty years, out here in coun-

try, where winter froze you for half the year, and the summer baked the blood out of your body. Just one child to help her, and that one not a daughter but a son to work with his father—working at the very thing that ground her life down flat, too, and not able to work enough to make it pay, no matter how little you slept, or how your arms and back ached. It couldn't be done. Two men couldn't make it pay—they could only drag enough out of the land so they could hang on, year after year, slipping downhill by inches.

But you had the land, and you were born to it, and what else could you do? You hung on, hoping for you didn't know what. Going to school, grudging every hour of time, but knowing there wasn't any way out at all, without the schooling. Going on to the State College, because, if you didn't, then it would be one more generation of Dundys that bled their life into the ground, hoping for something better for the next.

Six years at Veterinary school, then, and two more to go, taking two semesters for every single semester's credits, because you had to work part-time for clothes and lodging and a little extra to send home.

Two years to go—Sam's lips tightened into a straight white line. There wasn't any money to pay a hired man to work the farm. Even if there had been, no hired

man—no two men—would sweat and stretch themselves as his father had.

"I don't know, Mom," he replied finally. He still didn't know how to go about asking her. He didn't even know what the radio's being in the desk could mean. But his father must have had some good reason for having it.

"Do you know if anybody ever left anything with Dad for safe-keeping?" he asked at last. "Tools, or equipment of some kind? Or maybe somebody paid off a loan by giving Dad something like a radio? Do you know if he ever did anything like that?"

"Did you find some papers?" His mother's hand tightened in his, and her voice grew with hope. "Does somebody owe Tom? Do you think it'll be enough so you can keep going to school?" Then her hand grew limp again.

"No," she whispered, "that couldn't be. There's no sense trying to wish something into being true."

She had been with Tom Dundy for thirty years, working beside him as much as she had it in her to, and more. She had drawn on faith in her man for strength, through all that time, and the habit was still there.

Sam didn't have any way of doing anything for her. But he found himself wishing she didn't still have enough hoping in her to be weaker every time it died.

"You don't remember Dad's having anything like that around the house, Mom?" he kept at her, sorry he had started and wanting to get it finished.

"No, Sammy, not ever."

"All right, Mom. I thought there might be something, but I guess I was wrong. I'll keep looking."

He slipped his hand free of hers, leaned forward and kissed her. "Good night, Mom. I'm pretty sure I can work something out."

"Good night, Sammy. Don't stay up too late."

He left her room quietly, closing the door softly behind him. You kept hoping, somehow—Tom Dundy had taught both of them that. It wasn't a blind thing. It was knowing, deep inside yourself, that a man's strength and a man's mind ought to be enough in this world, that, if you held out long enough, things had to turn your way. But it was hard, losing the man.

He and his mother had both lived with his father, following him, taking the way he picked. Now he was gone, and they were both lost for a while. But there'd be a way out. The world hadn't changed merely because one man was gone.

Sam came into his own room and looked at the radio on the dresser . . .

The crops grew, and the rain

came down. There was always food growing, always a roof to live under. They were strong factors—permanent things that were rooted in more than one man's life. It was just that these factors didn't seem useful any longer.

Why had his father had that radio? Sam went to it and opened it without knowing exactly why, except that he was trying to find something to do.

Far away—farther than the first voices he'd heard—there was a burst of crystalline chiming, and a fainter answer. He twisted the stiff dial, moving down the band, and whisps of voices grew to clarity, faded, and were gone again. *reinni ser—. . . grut tagat vol*

"Ssthethannn . . . flahmit somahal . . . dundi, wat—"

His fingers froze.

"Dundy! Dundy!" The voice was harsh and deep, like no voice he had ever heard speaking English before. "Dundy, answer me, please! What's happened to you?"

Somewhere, among those people who spoke along these bandwidths, someone else was lost and uncertain because Tom Dundy was dead . . .

It was late at night, but Sam didn't look at his watch to check the time. For several hours, now, he had been sitting on the edge of his bed, listening to the radio calling his father's name at intervals, in a voice that sounded like the note of some heavy machine

crushing out a tunnel in the rock far underground.

Of all the people in the world, if you knew anybody, you knew your parents. You knew the sound and mood of every kind of footstep they could take, the meaning of every cough that cleared their throats before they spoke to you. You knew the touch of their hands and the rustle of their clothes.

He tried to picture his father, sitting and listening to that voice—answering it somehow—but he couldn't. Nothing he knew or remembered was any help to him.

His father was a man who had kept much to himself. If he had wanted to talk to somebody over that radio, without letting anybody know about it, there was always time during the day when he could have used it in privacy. But Sam couldn't think of any reason for his doing it.

He remembered something his father had told him once—"Youngster, it's no good talking about something you're doing. If it works out, then you got something better to talk about. If it don't, nobody knows you've been a damn fool but you."

That would explain his father's not telling him. But it didn't explain what the radio was all about.

It might have been going on for years. His father had seen too many seasons come and go and come back again, to act for tomorrow, or next month.

"Son, how about you going off to Vet school up at State College? Seems to me we could swing it."

He remembered that with absolute clarity. His father, twelve years ago, had turned to him at supper one night and said it, with the idea thought over in his head for nobody knew how long beforehand.

"State pays for your schooling—no trouble there. Be a little tight, with clothes and food to pay for, and us missing your help here, but it's worth it."

It was. It was worth the extra work his father had to go back to doing, an older man than the one he had been before Sam could do a man's work. A veterinary didn't have to kill himself over a plow for his food and his roof. A veterinary's mother could live in a house in town, with no more chores to do, and a veterinary's wife wouldn't dry up and grow into a thin, pale woman with creases in her forehead and the skin chapping on her hands until it cracked open.

So now Sam was three-quarters of the way to being a graduate veterinary. And Tom Dundy had killed himself to get him there. That had been twelve years in the planning.

Sam raised his head. The voice on the radio was saying something else.

"I know someone is listening. I

repeat—I know someone is listening to me. It is imperative that anyone connected with Thomas Dundy of Minnesota reply to this message." The voice was still heavy, still deep, but now it was desperate.

Sam didn't move. He wasn't sure that he should—he knew he didn't want to.

"Please—anyone with information regarding the present whereabouts of Thomas Dundy—it is urgent that I hear from him immediately. If he is unavailable, please locate someone truly able to speak for him."

Sam got to his feet and stood over the radio, his fists clenched.

"To operate the transmitting apparatus, move the first button to the—the left. Repeat—to transmit, switch the first button to the left. Speak toward the grill. I will now wait two minutes for a reply."

Sam reached out toward the knob, wondering who it was that wasn't quite sure of left and right.

Then he snapped the knob over, because he didn't dare not do it.

"This is Sam Dundy," he said shakily. "Who are you?"

He waited, but there wasn't any answer until he realized he ought to switch the knob back.

"—dy's son? Are you Tom Dundy's son? The student?"

"Yes. Look, who are you?"

"I can't tell you that if your father is available. Is he all right?"

"He's dead, mister. I found the radio by accident. I don't know anything about this. If you want anything, you'd better explain."

"Dundy died? How long ago?"

"Three days."

There was an odd, unidentifiable noise before the voice answered. Then it said, "You are almost finished with your studies, aren't you?"

"It'll be two years yet, mister."

"Two years! I don't know whether I can . . . "A pause, then, "I'm sorry for you about your father. Will you help me?"

Sam clamped his jaws together. "Not unless I know who I'm helping and what this is all about."

"I'm sorry—I'm being hasty. But I have a very good reason. If I do not have help soon, I shall be dead, too. When I lost contact with your father, I . . . You understand? I lost my composure. I don't—that is, I'm not in a position to extend my trust to very many people.

"Your father found me a number of years ago, but he could not help me. I gave him the communicator so we could keep in contact, and he could advise me when circumstances had changed. I have slowed my metabolism to nearly the critical level, but if you cannot help me soon, it will be too late. I apologize for my . . . brusqueness, but I am also prey to emotions. I ask you again—will you help me?"

Sam looked down at the radio—the communicator. He knew his face was pale. He wiped his hand across his face, and his fingers were damp when they came away.

Outside, he knew, the stars were shining cold and clear on this moonless night, and he knew, too, that there were voices whispering across the night between the stars.

He took a deep breath. "I don't know," he answered slowly. "I'd have to see you. How far away are you?"

The voice made the odd sound again. It might have been a sigh. "Somewhere on your father's holding. I don't know where, in relation to your domicile. I came down at night, and too quickly . . . I will broadcast a beam of sound. Walk along it, and I will guide you. You are a student—you are aware that not all organisms must resemble one of your race—that intelligence and emotion may nevertheless be present?"

"I'll be coming."

"I thank you."

Quietly, Sam walked downstairs and got the flashlight. Holding the communicator, he stepped out into the yard, listening as the voice said, "I will start the beam now." A series of sharp clicks began to come from the speaker.

Walking slowly in the darkness, picking his way with the flashlight's help, Sam left the yard, sometimes having to go off the

beam and find it again, when confronted by a building or a fence.

He figured out where he was headed almost immediately. There was a section of woods that he and his father had never cleared, or had ever intended to, what with so many other things to take care of.

He came down at night, Sam thought, and quickly. I wonder where he's from? I wonder which of the languages I heard is the one his people speak?

The earth under his feet felt different, somehow, than it had ever felt before—not as solid, yet better. He walked into the woods, threading his way between the trees.

"I hear your footsteps." The beam was cut off, and the voice spoke to him again. "Walk slowly. Look down."

Some of the trees were half-toppled, leaning against others, as though a windstorm had pushed them over. He must have walked through here a hundred times.

"Stop."

He looked down, and the dead leaves stirred, a few feet in front of him. He saw movement under them, something that looked like a sluggish rock, not too big. He saw a stir of thick arms that were like petrified tree roots, bending under enormous pressure.

"I have internal injuries," the voice said, booming and grating out from the ground, instead of from the communicator. Sam switched it off and shut the lid automatically. "I cannot dig out my ship and repair it, as I am. I have no access to my medical supplies or the interstellar transmitter. I have only my personal kits." The rock twisted itself sideward, and he saw an oval patch on its side, with a dark stain in its center.

"I was thrown clear. We are a tough people, and the ship is made of the same substance as the communicator case, but I cannot reach it. I'm at your mercy. If you help me, my bargain with your father will hold. I will tell you how to construct some of the circuits which make the communicator and the ship's propulsion fields possible. I understand such knowledge is negotiable here."

Sam nodded. "Yes, it is. There's a patent office, and companies that build electronic instruments. But I think I'd help you anyway." He thought about the old *Veterinary Cyclopedia*, with his father's stubborn notes. "I think I can do it. If not right now, *very* soon."

"Thank you. You are much like your father."

"I hope so, Mister," Sam answered, "I hope so!"



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